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The Banana in Middle American Economy

by

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CONTENTS

<u>Part</u>	<u>Page</u>
I. INTRODUCTION	
Nature of the Study	1
Early History of the Banana	5
Introduction of the Banana to the United States	9
II. FOUNDERS OF THE BANANA INDUSTRY	
Captain Lorenzo D. Baker	12
Minor C. Keith	15
Boston Fruit Company	18
United Fruit Company	21
Standard Fruit and Steamship Company	27
III. THE BANANA	
Commercial Varieties	31
Where Grown	39
Developing the New Plantation	41
Planting	50
Cultivation	51
Harvesting	53
To the Loading Port	55
Loading the Banana Cargo	56
Marketing	57
IV. A GEO-ECONOMIC STUDY OF THE PRINCIPAL BANANA PRODUCING AREAS OF CENTRAL AMERICA	
Geo-Economy Defined	59
Costa Rica	68
Guatemala	80
Honduras	91
British Honduras	101
Nicaragua	103
Panama	108
V. THE UNITED FRUIT COMPANY - ITS BANANA ACTIVITIES IN CENTRAL AMERICA	112
VI. POST-WAR PROBLEMS OF THE BANANA INDUSTRY	124
VII. SUMMARY	128
BIBLIOGRAPHY	137



LIST OF TABLES

<u>Table</u>	<u>Page</u>
I. Population, Area, and Density of Population of the Central American Republics	60
II. Comparative Analysis of Racial Groups in Central America	61
III. Transportation Facilities in Central America	61
IV. Percentage of Literacy	62
V. Educational Facilities	63
VI. Communication Facilities	63
VII. Approximate Daily Average Circulation of Newspapers and Magazines	64
VIII. Economic Functions of Chief Cities	64
IX. Bananas, Green or Ripe - Imports for Consumption into the United States, 1935-46	67
X. Banana Exports From Principal Producing Countries in Central America, 1924-46	77
XI. Costa Rica: Imports and Exports of Principal Commodities, By Value, 1945	79
XII. Banana Exports - Guatemala, July, 1947	88
XIII. Production and Exportation of Bananas	98
XIV. Location and Acreage of the United Fruit Company's Fruit, Sugar Cane, and Miscellaneous Cultivations, August 31, 1900	113
XV. Statement of Fixed Assets - United Fruit Company	114
XVI. Statement of Improved Acreage Lands and Cultivations - United Fruit Company	115
XVII. Statement of Railways Owned and Operated - United Fruit Company	116





PART I - INTRODUCTION

Nature of the Study

Surpassed only in importance by the Panama Canal, the banana trade has been the greatest economic development in the Caribbean region since the turn of the century. To some of the Middle American Republics it is even of more importance. Thousands of acres of virgin jungle areas have been turned into rich agricultural districts. Old crops, no longer profitable, have been replaced by the banana.¹

The economic significance of the banana industry could well be stated in the following words: the banana is to Middle America as corn and wheat are to North America. From a small business enterprise, scarcely more than a generation ago, it has developed into a vast and highly important industry which is a powerful and effective factor in the commercial life of the Middle or Central American countries producing and exporting the fruit, namely, Panama, Costa Rica, Honduras, and Guatemala. It has also been an important factor in the economic life of Nicaragua and British Honduras. The banana industry is comprehensive in its economic aspects, for it involves a highly specialized and integrated system of agricultural production in widely separated and extensive tropical areas, and the maintenance of adequate facilities of rail and water transportation.

¹Roberts, Walter Adolphe. "The Caribbean," p. 317.

The devotion of and the intensive application of modern scientific skill to solving the complicated problems associated with the cultivation of the banana in the Middle American tropics and its transportation to world-wide markets furnishes conclusive evidence of the economic value of the banana.

It is an outstanding fact that the banana industry has been an important factor in creating a better understanding between the United States and the countries of Middle America, at the same time contributing immensely to their economic development. With improved health and sanitary conditions, increased employment and higher wages, better living and working conditions, a more stable currency, and an efficient, constant, and dependable steamship and radio service, the countries of Middle America are taking their place among the prosperous and important food-producing areas of the world.

The banana trade is a hazardous one, as it has always been. While the immediate physical risks are not as great as they were in the pioneer days of some forty or fifty years ago, they have not been entirely eliminated. Numerous varieties of tropical diseases remain. The death rate of Latin Americans as a whole is twice that of the inhabitants of the United States.¹ The death rate of the low coastal regions of Middle America, though reduced by expensive sanitary and medical

¹Wilson, Charles Morrow. "Empire in Green and Gold," p. 4.

operations, mounts rapidly if malaria and sanitary protection are ever neglected or allowed to lapse. It is a fact that coastal localities, formerly pestilent and disease-ridden, have been transformed into health resorts. There exist today tropical communities where the death rate is lower than in cities of the United States.¹

There are also other elements that make the banana industry risky and hazardous. It is impossible in any year to predict a successful banana crop. It may prove to be a highly profitable investment or it may mean complete ruin to the investor. This element of risk is what makes the banana industry a pioneering agriculture. It was launched in the days of our own westward expansion, when our early settlers were pushing back the frontiers of the West and staking titles and claims to good land that was practically free for the taking and in many cases ready for the plow.

The development of the banana trade was, however, decidedly different. The banana pioneers found that bananas grow rapidly. They were discouraged at how quickly it also dies. They discovered how difficult it is to clear the jungle edge and how quickly it grows over if left unattended. They knew that if they were to cultivate the land intensively, a gigantic task lay ahead of them. Malaria infested swamps had to be drained; huge trees, centuries old, would have to be

¹United Fruit Company. "Its Activities at Home and in the Tropics," April 1, 1940, p. 7.

cut down along with the jungle undergrowth. To perform these tasks meant securing a dependable labor supply, and labor from the cooler, drier, upland plateaus of the Middle Americas simply could not be persuaded to migrate to the hot, humid, disease-ridden regions. The westward pioneers in our country took reasonable good health for granted; in the coastal regions of Middle America, disease and sickness were normal, and good health the exception. The tropical pioneers found that the jungles of Central America made almost all types of communication practically impossible. Building railroads was not only a difficult task, but a costly one. There were only a few, small, isolated coastal ports; in the days of the banana pioneers, Middle America had no regular shipping service as it has today.

It should be remembered that large areas of Central America were not new in the sense that the West was new. As early as the sixteenth century, in the days of the Spanish Conquistadores, the area had been explored. Practically all the potential banana lands in Middle America had been rejected as permanent dwelling places by the early explorers and adventurers. They continued on to the plateaus and mountains to settle, where they built their capital cities and settlements. Ancient Mayan ruins in these upland regions in Middle America furnish positive proof that the early Indian tribes also preferred the higher, cooler, and drier plateaus and mountain sides to the hot, jungle lowlands.

Through the years the banana industry in the Middle Americas has gradually developed and expanded. Today, as well as in the past, it represents one of the foremost industries in the Middle Americas.

Economically speaking, how does the banana industry compare with other industries within the principal banana producing countries? How and to what extent does the banana enter into the economic life of the people of these countries? How has the industry contributed to the economic development of these countries? This study is an attempt to answer the above and other relating questions.

Few people today realize the wide range of human endeavor involved in the cultivation of the banana and in its long journey from the plantation to the consumer. In order that one may comprehend more fully the economic effects of the banana industry in Central America, it is desirable that something should be said concerning the early history of the banana, the founders of the industry, the cultivation of the banana, and its shipment. The second half will then include a geo-economic study of the principal banana producing areas in Central America.

Early History of the Banana

Its earliest home is concluded to have been in the damp tropical regions of Southern Asia, (which includes northeastern India, Burma, Cambodia, and parts of southern China, as well as the large islands of Sumatra, Java, Borneo, the Philippines,

and Formosa),¹ where at a much later period, 327 B. C., Alexander the Great's armies found the fruit in the Valley of the Indies.² Doctor Herbert Spinden, the distinguished anthropologist of the Harvard Peabody Museum, points out that the early Greek, Roman, and Arabian authors first referred to the banana as a remarkable fruit tree of India.³ Bananas were also mentioned in ancient Chinese manuscripts. The renown Swedish botanist, Linnaeus, referred to the banana as "musa sapientum" - Fruit of the Wise Men, because Pliny, the Roman naturalist and author, had said that certain sages or wise counselors of India lived off the fruit.⁴ Linnaeus also referred to the closely related plantain as "musa paradisiaca" out of deference to a medieval legend which reported that the banana, and not the apple, was the forbidden fruit of Paradise.⁵

In the great Polynesian migrations from southern Asia, the banana was carried eastward to the islands of the Pacific.⁶

"Border conquests and pressure of population due to the exhaustion of the soil in the ancient regions of civilization were the probable causes for the great migration of South-Asiatic peoples eastward to the islands of the Pacific. It is difficult to date these migrations which seem, however, to have been stretched out over many centuries, the earliest, according to the consensus of scientists, was about the time of Christ.

¹Wilson, Charles Morrow. op. cit., p. 13.

²United Fruit Company. "The Story of the Banana," 1941, p. 3.

³Wilson, Charles Morrow. op. cit., p. 13.

⁴Ibid., p. 13.

⁵Ibid., p. 13.

⁶Ibid., p. 13.

By these migrations, bananas, with other agricultural products, were undoubtedly carried far into the Pacific, the earliest explorers found them cultivated in Hawaii and in Easter Island, the latter a dot of land nearly two thousand miles distant from the nearest other human habitation."¹

One of the earliest references to the banana appears in the work of the Arabic poet, Masudi, who died in A. D. 956. He praises a confection called "Kataif," an Arabian delicacy popular in Damascus, Constantinople, and Cairo, consisting of almonds, honey, bananas, and nut oil.²

The flourishing trade across the Indian Ocean in the first ten centuries of the Christian Era established the banana on the east coast of Africa. It is believed that the Arabs introduced bananas into Africa in their tradings with Morocco and the Sudan, and their ivory and slave trade in Central Africa. The fruit was gradually carried from tribe to tribe across equatorial Africa to the Guinea coast on the Atlantic, where the Portuguese found it when they arrived about 1482.³

The name "banana" had its origin in West Africa.⁴

"Von Diedrich Westermann, one of the principal authorities on African languages, states that the word 'banana' is undoubtedly of West African origin being found in various forms along the Gulf of Guinea; from the languages of this area he cites: "banema, banama, benena."⁵

¹Reynolds, Philip Keep. "The Banana," p. 19-20.

²Ibid., p. 23.

³United Fruit Company. "The Story of the Banana," p. 3-4.

⁴Wilson, Charles Morrow. op. cit., p. 14.

⁵Reynolds, Philip Keep. op. cit., p. 25-26.

"Sir Harry Johnston, in his scientific comparison of the Bantu group of languages (A Comparative Study of the Bantu and Semi-Bantu Languages, Oxford, 1919, pp. 996-97), gives many distinct names for the banana, such as 'konji, dom, baku, tori, nika,' etc.."1....." 'Bana, banana' is a widespread word in the African Guinea Coast regions and it was here that the west European word originated, through the Portuguese."2

The name appears to have come into rather general use by the end of the sixteenth century probably because the Portuguese recognized its value as food and carried the plants, with the slaves whom they captured, very nearly around the Equator, west to the Canary Islands, and later to Brazil and east to the Moluccas, one of their first colonies.³

The next step in the world journey of the banana was from the Canaries across the Atlantic to the New World. According to the consensus of scientific opinion, the banana plant was not a native plant to the Western Hemisphere. The ancient Indian tribes had no word for the banana. They did not leave among their ancient ruins and records any pictures of or references to the plant.⁴

Credit for bringing the banana to the New World belongs to Friar Tomas de Berlanga, one of the Spanish missionaries who followed the conquering forces of their king, the Spanish Conquistadores. In 1516, only a few years after Columbus

¹Reynolds, Philip Keep. op. cit., p. 26.

²Ibid., p. 26.

³Wilson, Charles Morrow. op. cit., p. 14.

⁴United Fruit Company. "The Story of the Banana," p. 4.

discovered America, Friar Berlanga brought with him to the island of Santo Domingo a few banana roots from the Canaries.¹ A few years later, as Bishop, he introduced the fruit to Panama.² Other missionaries in the New World followed Friar Berlanga's example, for records show that when the location of a mission had been chosen, one of the first works carried out was to see to the planting of bananas and plantains in order to insure an adequate food supply.³ When the banana in its westward travels from the coast of Guinea to the Canaries, across the Atlantic to the Western Hemisphere, finally reached the shores of the Pacific, its long journey around the world was at an end.⁴

"Man early recognized the food value of the banana as well as the fact that its roots or suckers, even though partly dried and transported long distances, would readily take root and grow in a rich soil and a warm, humid climate. Hence, in establishing colonies or missions, in transporting slaves and providing against famine, the banana appears consistently in the historical records of tropical countries of both hemispheres."⁵

Introduction of the Banana to the United States

"As late as the middle of the Nineteenth Century, travelers and naturalists wrote of the banana as a delicious fruit for the peoples of the tropics, but its possibilities as a staple food for the inhabitants of the temperate zone were not realized. It is supposed that the first bananas brought to the United States came from Cuba to New York early in the Nineteenth Century. By 1850 clipper ships were bringing occasional small cargoes and soon after the Civil War, Carl A. Franc who had been

¹United Fruit Company. "The Story of the Banana," p. 4.

²Ibid., p. 4.

³Ibid., p. 4.

⁴Ibid., p. 4.

⁵Reynolds, Philip Keep. op. cit., p. 78.

a ship's steward, started the first regular importations. The fruit was from Aspinwall, within the present Panama Canal Zone."¹

Almost the first bananas offered for sale in the United States were sold, wrapped in tinfoil, at the Philadelphia Centennial Exposition of 1876 for ten cents apiece.²

Perhaps not one North American in ten thousand had ever seen or tasted a banana in 1870, and even to seaport inhabitants bananas were strange and unfamiliar products. The United States' annual imports of bananas in the 1870's were numbered only by the thousands of bunches.³

Demands for the fruit increased during the 1880's. Despite the mechanical hazards of the early steamships, the number of days required on voyages were drastically cut and, as a result, tropical sources of supply were brought closer to the major seaports of the Gulf and the Atlantic Coast. New Orleans was a year-long banana port. As bananas freeze and spoil in the winter, the season on the East Coast was limited to spring, summer, and early autumn. Nevertheless, the annual imports rose from the hundreds of thousands into the millions.⁴

In 1884 banana imports into the United States totaled ten million bunches. In the following years imports fluctuated greatly; the trade became unstable and unpredictable due to

¹United Fruit Company. "The story of the Banana," p. 5.

²United Fruit Company. "Its Activities at Home and in the Tropics," April 1, 1940, p. 1-2.

³Wilson, Charles Morrow. op. cit., p. 15.

⁴Ibid., p. 15.

hurricanes, shipwrecks, glutted markets, droughts, and floods.¹
Despite this, the banana trade continued to grow, and by 1885
it faced the problem of a steady source of supply which, to
a certain extent, still remains to be overcome.²

¹Wilson, Charles Morrow. op. cit., p. 15.

²Ibid., p. 15.

PART II - FOUNDERS OF THE BANANA INDUSTRY

Captain Lorenzo D. Baker

The two real founders of the banana industry, Captain Lorenzo D. Baker of Wellfleet, Cape Cod, Massachusetts and Minor C. Keith of New York, made their first banana ventures at almost the same time, Baker in 1870 and Keith in 1872.¹

In 1870 at the age of 30, Baker, principal owner of the little 85 ton schooner "Telegraph," took a charter to convey a party of ten prospecting gold miners and about four tons of machinery and "work luggage" to Ciudad Bolivar, Venezuela, approximately 300 miles up the Orinoco River.² On his return trip Baker cast anchor at Port Morant, Jamaica.³ There he took on a load of bamboo and a few bales of ginger and allspice.⁴ While in the process of loading, Baker noticed green bunches of bananas wrapped in straw lying on the pier. The dock merchant told him that the green bananas would last fourteen days before ripening and offered them at a shilling per bunch. Having previously eaten the fruit and liking it, Baker recognized a challenge to his seamanship. If he could reach a United States port within two weeks, he might sell the fruit for a good profit. If his ship ran into storms or calms, the fruit would ripen and he would lose the lot.⁵

¹United Fruit Company. "The Story of the Banana," p. 5.

²Wilson, Charles Morrow. op. cit., p. 19.

³United Fruit Company. "The Story of the Banana," p. 6.

⁴Wilson, Charles Morrow. op. cit., p. 20.

⁵Ibid., p. 20.

Being a veteran of a gambling trade, Baker bought 160 bunches at a shilling a bunch and stowed them aboard his ship.¹ Kepner and Soothill, however, state that the fruit was given to Baker by a prominent Jamaican planter at Port Antonio, Jamaica.² Blessed with good weather and favorable winds, Baker made the return trip in eleven days, anchoring at Jersey City where he immediately sold the fruit at a profit of two dollars a bunch.³

Elated with this success, Baker decided to gamble further with the fruit. In March, 1871, after several months of fishing and freighting, Baker sailed from Provincetown again in the "Telegraph" headed for Port Antonio, Jamaica. At Port Antonio, Baker took on a full cargo of coconuts and bananas which he discharged at Boston after a stormy return passage. This was the first large shipment of bananas sold in Boston.⁴

As a result of the success of this gambling venture, Baker conceived the idea of operating a fleet of banana ships between Jamaica and Boston. As shipments grew in volume and profits rose, Baker spent a considerable portion of his time in Jamaica attending to the supplying and loading of banana cargoes⁵ and at the same time visiting Jamaican coastal farms where he urged the islanders to grow more bananas and with

¹Wilson, Charles Morrow. op. cit., p. 20.

²Kepner and Soothill. "The Banana Empire," p. 33.

³Wilson, Charles Morrow. op. cit., p. 20.

⁴Ibid., p. 21.

⁵United Fruit Company. "The Story of the Banana," p. 7.

greater care to supply the growing banana market in the United States.¹

Because of the inadequate means of transportation afforded by the sailing vessels of that era, the enterprise at the end of three years was a failure forcing Baker to return to the sea again carrying general cargoes and bananas to replenish his lost savings.² The small and irregular shipments of bananas could not support nor create demand of a uniform market price.³

By 1879, Captain Baker had established in Jamaica an organization through which he loaded other ships as well as his own. He shipped Jamaican bananas to Boston, as well as to New York, by the Atlas Steamship Lines for which he was agent. Part of the New York shipments were dispatched by rail to Boston and sold in that market.⁴ The economic salvation of Jamaica was credited to the establishment of banana production; since the late 1860's, the Jamaican sugar industry had been in a very bad state of affairs.⁵ Captain Baker, as promoter of the Jamaican banana industry, laid the foundation of the future prosperity of the island - a service which was gratefully recognized by the Jamaicans.⁶

The fruit shipped by Baker to Boston was sold by the

¹Wilson, Charles Morrow. op. cit., p. 21.

²Reynolds, Philip Keep. op. cit., p. 45.

³Ibid., p. 45.

⁴United Fruit Company. "The Story of the Banana," p. 8.

⁵Ibid., p. 8.

⁶Reynolds, Philip Keep. op. cit., p. 46-47.

commission house of Seaverns and Company, associated with whom was Andrew W. Preston who made the actual sales.¹ Preston became convinced that if the banana business was properly organized, there could be a bright future for it. Due to Preston's organizational ability and firm tenacity of purpose, he proved that this conviction was well founded.²

Minor C. Keith

In 1871, Minor C. Keith at the age of twenty-three joined his three brothers in Costa Rica who were attempting to construct a railroad from the Caribbean port of Limon to San Jose, the mountain capital.³ Keith early had an opportunity to attain a leading position in Costa Rica. The finances of Costa Rica were in a bad condition, and the connecting link between the Central Railway and the Caribbean coast was still to be constructed. By agreeing to help Costa Rica meet these two problems, Keith obtained privileges which made him the dominant force in railroading, governmental finance, and the development of the banana industry in Central America.⁴

The building of this railroad presented a tremendous task. Topographical surveys led through fever-infested jungles, over mountains almost impassable. Supplies were moved up from the Limon coast only after tremendous effort and overcoming hardships of the worst kind. The first twenty-five miles cost

¹United Fruit Company. "The Story of the Banana," p. 8.

²Ibid., p. 8.

³Ibid., p. 8.

⁴Kepner and Soothill. op. cit., p. 44.

four thousand lives - mostly white men.¹ Keith took over the contract to complete the railroad after he had lost his three brothers in the attempt. Financial difficulties were ever present; on one occasion both the whites and the Jamaican negroes worked nine months without pay, but because of their loyalty and respect for Keith they stayed with him. It took nineteen years to complete this railroad, Limon to San Jose, a distance of a little more than one hundred miles.²

Keith early foresaw that even to complete the road he would have to have freight in paying quantities. To obtain funds he decided to go into the banana business. Obtaining a supply of roots and suckers from Carl A. Franc³ at Aspinwall (now Colon, Panama), Keith began his banana experiments in the Costa Rican jungle.⁴ When his plantations commenced to bear in quantity Keith, in 1879, shipped small cargoes of bananas to New York. These were the first bananas ever received at that port from Costa Rica. Even at that time the fruit was looked upon as a curiosity and a rare tropical luxury.⁵

During the next twenty-five years, Keith gradually developed his banana business in Central America securing his fruit supplies from Costa Rica, Nicaragua, Honduras, and also from Colombia in the vicinity of Santa Marta.⁶ With the exception of Carl A.

¹United Fruit Company. "The Story of the Banana," p. 5.

²Ibid., p. 5.

³Ibid., p. 6.

⁴Reynolds, Philip Keep. op. cit., p. 42.

⁵Ibid., p. 42.

⁶United Fruit Company. "The Story of the Banana," p. 6.

Franc's early and irregular shipments from Aspinwall, Keith's were the first banana shipments made from any of the above countries.¹

Net profits were almost one dollar a bunch.² Elated with this success Keith determined to plant more bananas in the fertile Zent Valley near the headless railroad in order that the first small cuttings could be carried out to Port Limon by handcar. To furnish additional revenue to complete the railroad Keith opened up a chain of commissaries from Belize, British Honduras to Costa Rica which proved to be a rather dangerous venture. Most of Keith's customers were his own employees, and since Keith seldom could pay his employees, they rarely possessed money with which to buy merchandise.³

In Costa Rica's Zent Valley, Keith continued to plant farm after farm of bananas. He also acquired title to ten thousand acres of Nicaraguan jungle lands near Bluefields to provide for additional banana farms, and ten thousand more acres near Bocas del Toro, Almirante Bay, on the Caribbean side of Panama. In South America, Keith secured possession of fifteen thousand acres near Santa Marta, Colombia, which is still producing bananas.⁴

Keith's Colombian venture, like his merchandising and banana experiments in Central America, were feebly backed to

¹Reynolds, Philip Keep. op. cit., p. 43.

²Wilson, Charles Morrow. op. cit., p. 54.

³Ibid., p. 55.

⁴Ibid., p. 58.

some extent by London-chartered limited liability corporations of which Keith was the principal owner.¹

The banana industry, which in Costa Rica originated in part as a result of Keith's pioneering of the railroad, developed rapidly. In 1884 total banana exports from Limon, Costa Rica amounted to but 420,000 stems, increasing regularly up to 2,962,771 stems in 1899, the year in which the newly organized United Fruit Company took over Keith's properties.² Stimulated by the banana industry, Limon developed from an inconspicuous jungle village to an important city which today ranks first among Costa Rica's ports.

Boston Fruit Company

In spite of heavy losses of fruit from spoilage and freezing, the usual marine hazards, and the inadequacy of shipping facilities, Captain Baker and Andrew Preston accomplished a great deal in proving that bananas could be made, as Preston termed - "a respectable merchandise."³ Both were convinced in 1885 that it was time that Boston had an accredited banana-selling firm.⁴ Impressed with Andrew Preston's ability in disposing of Captain Baker's fruit shipments to Boston, Baker invited him to join his banana enterprise.⁵

At thirty-seven, Preston was one of the best produce

¹Wilson, Charles Morrow. op. cit., p. 58.

²Kepner and Soothill. op. cit., p. 51-52.

³Wilson, Charles Morrow. op. cit., p. 69-70.

⁴Ibid., p. 69-70.

⁵United Fruit Company. "The Story of the Banana," p. 8.

dealers of Greater Boston. Because of its great distance from the banana lands of the tropics, the Boston market was rarely flooded with the fruit. Boston and its factory suburbs were growing, factory workers were eager customers of bananas as long as the fruit remained cheap. Preston intended to keep the fruit cheap. He had no ambition to promote a big company, but he did want to "interest" Boston shippers, bankers, and merchants in a banana firm.¹

Preston thought that such a firm should limit its enterprises to selling the fruit while Baker and his associates could continue their shipping activities. Preston was interested in sufficient capital for a modest and independent commission firm with some assurance of protection against sudden losses. After a year of soliciting and explaining, Preston and Baker carefully molded together an organization - the Boston Fruit Company - which later was to grow into the largest tropical and shipping company in the world.²

It was an informal partnership as Preston put it, as "just a small firm of good people" with a paid-in capital of \$15,000, divided among twelve New Englanders as follows:³

Captain Jesse H. Freeman	1 $\frac{1}{4}$ shares	\$ 1875
Captain Lorenzo D. Baker	1 share	1500
Lamont G. Burnham	1 share	1500
Thomas Mandell Hart	1 share	1500
W. F. Robinson	1 share	1500
O. S. Crowell	1 share	1500

¹Wilson, Charles Morrow. op. cit., p. 70-71.

²Ibid., p. 71.

³Ibid., p. 71.

A. S. Messner	1	share	1500
Thomas B. Griffiths	1	share	1500
John F. Crocker and Edric Elridge	1	share	1500
Andrew W. Preston	$\frac{1}{2}$	share	750
E. E. Locke	$\frac{1}{4}$	share	375
Total			<u>\$15000</u>

Another source states that the Boston Fruit Company was organized in 1885, an association of ten New Englanders each of whom contributed two thousand dollars.¹ Also, the names² of the ten men who formed the partnership in 1885 were:

Lorenzo Dow Baker, Lamont G. Burnham, John F. Crocker, Edric Eldridge, Jesse H. Freeman, Major Thomas D. Griffith, Thomas Mandell Hart, Isaac N. Keith, Edward D. Mandell, and Andrew W. Preston. No explanations have been found for the conflicting statements.

The partnership agreed to waive dividends and to reinvest all earnings for a period of five years. Before this period had elapsed, the partners invested additional capital five times the original amount. In their early operations, their first capital investment was practically lost. During the trying years, Preston's courage and ability to command confidence and to secure loans when needed, were large factors in the success of the enterprise.³

In 1890 the company was incorporated, retaining its name with Baker as president and Preston as the Boston manager.

¹United Fruit Company. "The Story of the Banana," p. 8.

²Reynolds, Philip Keep. op. cit., p. 47.

³United Fruit Company. "The Story of the Banana," p. 8.

The Boston Fruit Company gradually extended its banana operations until, with several subsidiaries, it drew its banana supplies from Santo Domingo, Cuba, and Jamaica, shipping the fruit to Boston, New York, Philadelphia, and Baltimore.¹ After five years of profitable operations, 1885-1890, the company was valued conservatively at \$531,000.²

The United Fruit Company

In 1898, the year preceding the organization of the United Fruit Company, the total imports of bananas from the American tropics did not exceed 12,000,000 stems, or approximately one-fourth of the imports in 1913 which totaled 50,000,000 stems.³ The sole reason why more bananas were not imported in 1898 and 1913 is that no more were available for shipment.⁴

The problem in 1898, and which remains the problem to this day, was to produce more bananas for a steadily increasing popular demand. At the time of the organization of the United Fruit Company, the following firms, corporations, and individuals were engaged in importing bananas into the United States:⁵

<u>Company</u>	<u>Area of Operations</u>
Boston Fruit Company	Jamaica and West Indies
Tropical Trading and Transport Company, Ltd.	Costa Rica
Snyder Banana Company	Panama

¹United Fruit Company. "The Story of the Banana," p. 8.

²Kepner and Soothill. op. cit., p. 33.

³Adams, Frederick Upham. "Conquest of the Tropics," p. 69.

⁴Ibid., p. 69.

⁵Ibid., p. 70.

Colombian Land Company, Ltd.	Colombia
J. D. Hart Company	Jamaica and Cuba
J. M. Ceballos & Company	Jamaica
Orr and Laubenheimer Company, Ltd.	Nicaragua and British Honduras
Camors, McConnell & Company	Nicaragua and Panama
New Orleans Belize Royal Mail and Central American Steam- ship Company	Honduras and British Honduras
W. W. & C. R. Noyes	
John E. Kerr and Company	Jamaica
J. H. Seward Importing and Steamship Company	West Indies
Aspinwall Fruit Company	Honduras and Panama
West Indian Fruit Company	West Indies
Monumental Trading Company	Jamaica
West India Trading Company	West Indies
Henry Bayer & Son	
Camors-Weinberger Banana Company, Ltd.	Nicaragua
J. B. Cefalu & Brother	Honduras
S. Oteri	Honduras and Nicaragua
The Bluefields Steamship Company, Ltd.	Nicaragua
W. L. Rathbun & Company	Panama

There were dozens of other small firms and individuals engaged in the business on a small scale. Prior to 1899, there were not less than 114 companies or firms which took part in the importation of bananas to the United States. Of these, only twenty-two of any importance (see above list), were still actively operating when the United Fruit Company was formed.¹

Most of these small banana companies were inadequately financed and managed by men who had little or no practical knowledge of the banana industry. Few had been in the business for any length of time, and most of them handled insignificant

¹Adams, Frederick Upham. op. cit., p. 71-72.

quantities of bananas. Regularly these small companies would spring into operation, struggle for existence and ultimately fail and drop out of existence, leaving their stockholders empty-handed.¹ The first four companies in the list, pages 21 and 22, were merged into the United Fruit Company. Some of the others have retired from the industry, others have been absorbed by smaller companies which now compete with the United Fruit Company.²

In 1899 the Boston Fruit Company interests, headed by Captain Baker and Andrew Preston, importing bananas chiefly from Jamaica and the West Indies, and the companies controlled by Minor C. Keith, handling bananas from Central America and Colombia, joined in forming the United Fruit Company.³ On March 20, 1899, the company was incorporated under the laws of New Jersey with an authorized capital stock of twenty million dollars.⁴ The Boston Fruit Company detailed "write-off" was as follows:⁵

1-Boston Fruit, Original, 5,000 shares at \$635.50
Total \$3,177,500 payable with 31,775 shares of
United Fruit stock at par.

2-In addition Boston Fruit received for United Fruit stock:

Banes Fruit Company	4550 shares at \$300	\$1,365,000
Dominican Fruit Company	1000 shares at \$250	250,000
American Fruit Company	260 shares at \$250	65,000
Quaker City Fruit Co.	250 shares at \$250	60,000
Buckman Fruit Company	250 shares at \$250	62,500
Sama Fruit Company	600 shares at \$208.83	125,000

¹Reynolds, Philip Keep. op. cit., p. 53.

²Adams, Frederick Upham. op. cit., p. 70.

³United Fruit Company. "The Story of the Banana," p. 9.

⁴Wilson, Charles Morrow. op. cit., p. 107.

⁵Ibid., p. 107.

From the start Boston Fruit controlled the "confederation" called the United Fruit Company, whose officers were predominantly Boston Fruit men:¹

President and Director	Andrew W. Preston, Brookline, Mass.
First Vice-president and Director	Minor C. Keith, Brooklyn, New York
Second Vice-president and Director	Lamont G. Burnham, Boston, Mass.
Director	T. Jefferson Coolidge, Jr., Manchester, Mass.
Director	Kenneth K. McLeren, Jersey City, N. J.
Secretary	Bradley W. Palmer, Boston, Mass.
Treasurer	Charles A. Hubbard, Boston, Mass.

In April, 1899 Keith traded the entire outstanding capital stock of the Tropical Trading and Transport Company (389,000 common shares at one pound sterling per share) together with 500,000 shares of the Snyder Banana Company and 3400 shares of his Colombia Land Company, Ltd. for a total of \$3,964,000 in United Fruit Company stock at par.²

As a result of this consolidation, ample capital and resources were for the first time made available, thereby insuring large-scale operations, essential to a stable, serviceable industry. New areas were converted into extensive banana farms, large production areas in widely scattered localities were developed, insuring an adequate fruit supply for the market in case of losses by hurricane, flood, windstorm or drought

¹Wilson, Charles Morrow. op. cit., p. 107-108.

²Ibid., p. 108.

in any single area.¹

By the end of its second month of operations, the United Fruit Company had become a working association of twelve banana companies with properties in Boston, New York, Philadelphia, Baltimore, New Orleans, Cuba, Jamaica, the Dominican Republic, Costa Rica, Panama, Colombia, and Nicaragua.²

At the time of consolidation, Boston Fruit alone had 6,000 acres in bearing and owned all told, about 77,000 acres of tropical lands, mostly unremunerative jungle areas. Keith had contributed the decisive and potential banana properties. The first annual report of the United Fruit Company announced its first dividend of \$2.50 per share, the first of an unbroken succession of dividends. It reported that the Company owned or leased approximately a quarter-million acres of tropical lands in Colombia, Santo Domingo, Cuba, Jamaica, Honduras, Costa Rica, and Nicaragua. Of this, 66,000 acres were under cultivation, consisting of 44,000 acres in bananas; 8,000 acres in sugar cane near Banes, Cuba; about 4,500 acres of coconut groves in Jamaica; and the rest in livestock pastures. The Company had nearly 15,000 tropical citizens on its payrolls.³ Forty-six years later, the Company owned and leased a total of 3,060,247 acres,⁴ an area comparable in size to the States of

¹United Fruit Company. "The Story of the Banana," p. 9.

²Wilson, Charles Morrow. *op. cit.*, p. 109.

³*Ibid.*, p. 110.

⁴Moody's Industrials, 1947, p. 1614-1615.

Connecticut and Rhode Island. Of this total, 437,606 acres were improved lands.¹ In 1940 the Company had on its payrolls approximately 77,000 employees, including all forms of human endeavor.²

At the time of consolidation, the fleet of the new company included eleven steamships ranging in size from 600 to 1000 tons, supplemented with about twelve to thirty chartered ships. The Company owned 112 miles of railroads nearly all of it linking the coastal banana regions with the sea. The rolling stock consisted of 300 boxcars and flatcars and 17 locomotives.³

During its first year, United Fruit was Boston's only banana importer, and its gross profit on the two million bunches sold amounted to \$500,000 or twenty-five cents per bunch.⁴

It was obvious for years that the banana industry in order to survive was one which must be conducted on a large scale. There is a wide difference between rearing a conservative banana enterprise and taking a chance on a small plantation. Many agricultural products can be raised on a small scale. Wheat, corn, oats, barley, truck garden products, apples, pears, grapes, and others can be grown by individuals of limited capital who can compete somewhat successfully with

¹Moody's Industrials, 1947, p. 1614-1615.

²United Fruit Company. "Its Activities at Home and in the Tropics," p. 8.

³Wilson, Charles Morrow. op. cit., p. 110.

⁴Ibid., p. 111.

those who cultivate on a much larger scale. Sugar and bananas are in an entirely separate and distinct class; they can be produced on a small scale, but successful economical production demands vast acreage and large expenditures for the complicated equipment of cultivation and transportation. It was a proven fact in 1899 that no banana enterprise could hope for continued and permanent success unless financially equipped to insure a widely scattered source of supply, adequate and dependable means of transportation, and finally methods of marketing and distribution which would place bananas within reach of all potential markets.¹

The legal incorporation of the United Fruit Company on March 20, 1899 meant more than simply the birth of a corporation. It was the actual birth of the banana industry as we know it today. It had taken thirty-four years of blunders, experiments, disasters, partial successes, and the assumption of innumerable risks and hardships in the tropical virgin jungles to create an enterprise prepared to take advantage of the experience which had so costly been gained.²

The Standard Fruit and Steamship Company

The Standard Fruit and Steamship Company³ together with the United Fruit Company comprise the two largest banana concerns presently operating in Central America and the West Indies.

¹Adams, Frederick Upham. op. cit., p. 80.

²Ibid., p. 85.

³Moody's Industrials, 1947. p. 1092-1093.

The Standard Fruit Company, a comparatively new concern, was incorporated in Delaware on March 23, 1926 to acquire Standard Fruit and Steamship Company, Bragman's Bluff Lumber Company of Nicaragua and all preferred and fifty per cent of the common stock of the Mexican American Fruit and Steamship Company.¹ In 1933, it acquired the Eastern Seaboard Corporation and its 100 per cent owned subsidiary, American Fruit and Steamship Corporation. In the same year it also acquired the preferred and common stock of the Standard Navigation Corporation as well as the interests of the Vaccaro Brothers in two refrigerated ships. The Vaccarro Brothers had started a banana plantation near La Ceiba, Honduras in 1899 which grew rapidly.²

The company's principal business is the production, purchase and sale of bananas. Its first-class steamships carry passengers as well as freight, making regular trips to the West Indies and Central America from New York, Baltimore, New Orleans, and Philadelphia.

In 1935 the Haitian Government entered into a contract with the company granting the company the exclusive right to purchase and export all bananas in Haiti. Its banana business is conducted in Honduras and Haiti. The company owns railroads, steamships, timber, coconut, and other properties in Central

¹Moody's Industrials, 1947. p. 1092-1093.

²Kepner and Soothill. op. cit., p. 102.



America and the United States. Details¹ as of December 31, 1945 as compared with the United Fruit Company² as of the same date are as follows:

	<u>Standard Fruit</u>	<u>United Fruit</u>
Livestock owned:		
Cattle	5604	{ 42869
Horses and mules	2183	
Miles of railroad:		
Owned	281.10	1287
Leased and operated	-	108
Miles of tramway owned:	-	231
Railroad Equipment owned and Operated:		
Locomotives	28	221
Cars	848	6474
Lands and Cultivations:		
Banana acreage		
Honduras	9776	38569
Haiti	4273	-
Colombia	-	1849
Panama	-	20062
Costa Rica	-	20224
Nicaragua	-	-
Guatemala	-	29162
Cuba	-	-
Jamaica	-	809
Santo Domingo	-	734
Sugar Cane		
Cuba	-	93312
Jamaica	-	2443
Coconut acreage	7499	-
Abaca	-	27059
Citrus acreage	437	-
Miscellaneous acreage	1134	4805
Pastures (acres)	16042	{ 150318 (other)
Townsites, etc. (acres)	162133	

¹Moody's Industrials, 1947, p. 1092-1093.

²Ibid., p. 1614-1615. Refer also "Forty-Sixth Annual Report to the Stockholders of the United Fruit Company for the Fiscal Year 1945," p. 15.



	<u>Standard Fruit</u>	<u>United Fruit</u>
Cacao:		
Costa Rica	-	24748
Panama	-	12794
Other	-	10718
Improved acreage	<u>197294</u>	<u>437606</u>
Unimproved acreage	<u>442504</u>	<u>2622641</u>
Total Acreage	<u>639798</u>	<u>3060247</u>
Number of steamships	10	96 ¹
Gross tonnage	31377	425000

¹United Fruit Company. "Its Activities at Home and in the Tropics," p. 4.

PART III - THE BANANA

Commercial Varieties

The banana and its allied plants constitute a botanical family known scientifically as the "Family Musaceae."¹ There are approximately twenty-seven different species or subspecies of bananas.² No attempt will be made here to present a lengthy description of the botanical position of the banana.

The most important species commercially are: "Musa sapientum" (Fruit of the Wise Men) - found growing in the West Indies and the Caribbean countries; "Musa Cavendishii" (dwarf variety) - found principally in the Canary Islands, on the African mainland, in parts of Asia and in the islands of the Pacific and Indian oceans; and "Musa paradisiaca" (Fruit of Paradise) known as the plantain (see page 6). The last-named species includes several varieties and grows luxuriantly throughout the hot, humid, tropical areas of both hemispheres where it is a staple food.³

The plantain is not palatable when raw, but after being cooked it becomes an excellent food; in some tropical areas the fruit is used as a substitute for potatoes and bread. Botanically, the banana and the plantain belong to the same family, "Musaceae." In appearance, they are similar; however, in early literature, they are not clearly distinguished.⁴

¹United Fruit Company. "The Story of the Banana," p. 9.

²Wilson, Charles Morrow. op. cit., p. 12.

³United Fruit Company. "The Story of the Banana," p. 9.

⁴Reynolds, Philip Keep. op. cit., p. 12.



In both, the plant-stalk dies after bearing a single stem or bunch. The fruit usually has no seeds, and reproduction is by new shoots or "suckers" which grow from the root-stock. The original Spanish word for banana is "platano" from which the word "plantain" is apparently derived.¹

The foremost variety of "*Musa sapientum*" destined to become the banana of a world-wide commerce is the Gros Michel. This is the variety dealt with in this thesis. The less familiar red banana is another variety of the "*Musa sapientum*" species. The leadership of the Gros Michel in the banana industry today is due to the compactness of the stem, its ability to be transported hundreds of miles, its superior qualities in ripening, and its rich, excellent flavor.²

Other seed-bearing and inedible species are noted for their fibre such as manila hemp. There are others which are merely ornamental plants.

The cultivated varieties of the edible banana including the plantain do not usually bear fertile seeds. The development of the edible banana from the seed-bearing species of little or no food value was probably due to natural hybridization, and the fact that primitive man was able to take advantage of forms with seedless fruits and preserve them by vegetative propagation.³ The banana plant or tree, as it is

¹United Fruit Company. "The Story of the Banana," p. 10.

²Reynolds, Philip Keep. op. cit., p. 14.

³Ibid., p. 2-5.

sometimes called, is a rapid growing herbaceous perennial containing, in the aggregate, approximately eighty-five per cent of water. It is claimed that it is probably the largest terrestrial plant not having a woody stem above the ground.¹

Here at home, the plant that closely resembles the banana is a flower - the canna. Opening the stalk of a canna and separating its overlapping layers will give one an excellent idea of how a banana plant grows. The banana plant has no seed, but is propagated by young plants which bud from the underground tuberous stem of an older plant. The food stored in this underground stem, as well as that furnished by the leaves, nourishes the flower-stalk, the fruit, and also the new shoots or "suckers" as they are sometimes called.²

The banana tree has no woody roots nor a primary root as do most trees. There are two sets of roots; one set pushes out horizontally in all directions and the other grows vertically downward. The main cord-like roots are fleshy and are uniform in size and of about the diameter of a lead pencil. Along these roots grow hundreds of root-hairs which alone do the work of absorbing the moisture of the soil.

On the rhizome or true stem, large "eyes" develop similar to those on the potato. From these eyes spring the leaf-sheaths which shoot upwards. The first leaves breaking through

¹Reynolds, Philip Keep. op. cit., p. 59.

²Ibid., p. 59.

the ground about three or four weeks after planting, are tightly rolled together and are very sharply pointed. New leaves grow rapidly overlapping one another and forming a hard, compact stem which appears to be the trunk of the young banana tree. In the normal course of about twelve months, the plant has grown to a height of fifteen to thirty feet with a diameter at the base of the tree of about nine to sixteen inches depending on climatic and soil conditions.

By the tenth or eleventh month, the stem which is to bear the fruit has emerged from the root-stock through the center of the leaf-sheaths or trunk and the blossom has "shot" or appeared at the top of the trunk. The bud increases in size, bends over and downward; the bracts drop off disclosing the very small young bananas which point downward. As they grow, they gradually turn upward.

The flowers of the banana plant grow in clusters, spirally arranged, upon a long stem or stalk. The first of these clusters which appear (usually from six to twelve) form the "hands" of the fruit. The remaining clusters at the end of the stalk are sterile and eventually wither and drop off. The terminal flower-bud that develops below the stem bearing the fruit is a very pretty flower. It is heart-shaped and is from 16 to 24 inches in length consisting of maroon-colored bracts tightly enclosing the remaining small, yellowish flowers. At the base of the plant any number of shoots or "suckers" arise. If they are allowed to mature, each develops a rhizome

of its own. Pruning away such shoots as are not intended to yield fruit is a most important operation which will be taken up under the section - Cultivation.

When fully developed the bright green leaves of the banana tree are from eight to twelve feet long with a breadth of two feet and up and spread out or rise almost vertically giving a very graceful, palm-like appearance to the plant. The number of leaves varies from eight to twenty according to the fertility of the soil and the vitality of the plant itself.

"The function of the leaves is to provide food for the requirements of growth in the plant. The energy or motive power necessary for the work of manufacturing the food is obtained from the sun's rays by means of the green colouring matter. The water absorbed by the roots, containing nitrogenous and mineral matter, is carried up to the leaves, and a union of these elements with the carbonic acid of the air takes place. The manufactured food is transferred to any part of the plant where growth is taking place, or, if not required for growth, it is stored up in the bulb in the form of starch grains for use later. The green colour of the trunk shows that it is also taking part in the manufacture of food."¹

The leaves are also useful in many other ways; the writer in his observations, has seen the leaves used by the tropical inhabitants for any number of purposes, from wrapping up tamales to using them for umbrellas. They are also valuable in making baskets and in lining the interior of banana cars. Banana cars are similar to cattle cars, the leaves being placed vertically along the sides of the cars to furnish

¹Fawcett, William. "The Banana," p. 8.

shade and protection from the sun's rays as the fruit is hauled from the plantation to the port of loading.

Banana plants vary greatly in size. Those cultivated in the fertile river-bottoms along the Caribbean coast of Central America frequently reach a height of thirty feet. As a comparison it is interesting to note that the average height of the plant in Central America is from eighteen to twenty-five feet, and in Cuba from twelve to fifteen feet, the difference indicating clearly the effect of climatic conditions as one recedes from the humid warmth of the torrid zone.

Each mature plant bears one stem of fruit, made up of clusters, usually called "hands" ranging from five to ten hands. Each hand contains from ten to twenty individual bananas usually referred to in the banana industry terminology as "fingers." On the average there are sixteen fingers to a hand. Ordinarily any stem having less than six hands is not marketable. Harvested fruit of this grade that occasionally reaches the port of loading is usually rejected by the fruit checkers on the dock. However, during the war years when shipping facilities were at a minimum and hundreds of in-bearing acres had been "chopped back," all available fruit was shipped including deck-loads of rejects and even some stems cut into individual hands in order to take advantage of all available shipping space.

Commercial terminology peculiar to the banana industry

divides bananas into classes based on the number of hands - of not less than ten fingers each to each stem.¹ Accordingly, "nines" are stems containing nine or more fully developed hands; "eights" are those containing eight fully developed hands.

By way of contrast, it is interesting to note that the United States Department of Commerce reports that "nines" are bunches containing nine or more fully developed hands of not less than thirteen fingers each; "eights" are those containing eight fully developed hands of thirteen fingers each.²

Soil and climatic conditions under which the banana is grown, affect the size and the weight of each stem. Ordinarily, a nine-hand stem will vary in weight from fifty to seventy-five pounds. For all practical purposes such as for tonnage reports, a stem is usually considered on the average to weigh seventy pounds. It is a known fact that fruit of adjoining banana farms frequently vary in weight, due in many cases to differences in rainfall, and control of banana diseases such as sigatoka and Panama.

Central America produces the heaviest and best-developed fruit, Cuba the lightest, indicating how, as previously pointed out, varying climatic and soil conditions affect the size of the tree itself.³ The banana is always harvested green,

¹United Fruit Company. "The Story of the Banana," p. 14.

²U. S. Department of Commerce. Industrial Reference Service, "Bananas," February, 1946, p. 3.

³United Fruit Company. "The Story of the Banana," p. 14-15.

whether it be for local or foreign consumption. If tree ripened, it loses its flavor and becomes insipid; the skin cracks and the ripening pulp becomes the prey of flies, insects, and birds.¹

For export, consideration has to be given to the time that will be taken on a ship's voyage. For a voyage of twelve or thirteen days, fruit must be cut much earlier than for one of only four or five days. The earlier it is cut before becoming "full," the longer it will take to ripen. The fruit, when harvested, is also graded which refers to the fulness of the fruit and is expressed as follows: "Full three-quarter," the grade for United States bound shipments; "Three-quarter," shipments bound for England and the Continent, which are less fully developed on account of the longer voyage.²

Fawcett³ states that one of the most striking features about the banana is the enormous amount of food produced in proportion to the area occupied, for example: bananas, 242,000 pounds of food per acre; potatoes, 4,000 pounds; wheat, 2,000 pounds. The banana is a good source of vitamins A, B₁, C and G. It is rich in fruit sugars and when ripe, its natural, soft, smooth food is easily digested.

The banana is a sanitary food, its thick peel effectively protects the food portion from bacteria or other forms of contamination.

¹United Fruit Company. "The Story of the Banana," p. 15.

²Ibid., p. 14.

³Fawcett, William. op. cit., p. 6.

"The following table¹ presents an interesting comparison of the edible portion of the banana (from analyses by Research Department of United Fruit Co.) with that of other fruits (Chatfield and Adams, Circular No. 549, 1940, United States Department of Agriculture)":

	Water	Carbohydrate (chiefly sugars)	Protein	Fat	Ash	Calories Per 100 Grams
Bananas	75.6%	22.2%	1.2%	.2%	.8%	95
Grapes	81.9	14.9	1.4	1.4	.5	78
Cherries	83.0	14.8	1.1	.5	.6	68
Apples	84.1	14.9	.3	.4	.3	64
Oranges	87.2	11.2	.9	.2	.5	50
Peaches	86.9	12.0	.5	.1	.5	51
Muskmelons	92.7	5.9	.6	.2	.6	28
Strawberries	90.0	8.1	.8	.6	.5	41

Where Grown

Bananas are grown in almost all the tropical countries, growing best in fine, sandy loam. While it is possible to cultivate them in sub-tropical zones, their production to the best advantage requires a tropical climate and a heavy rainfall. The fruit is not grown commercially in the United States.

"The northern limit of their cultivation (usually *Musa Cavendishii*) is reached in Florida, south of 29° lat., the Canary Islands, Egypt and south Japan, the southern limit in Natal and south Brazil."² Good underdrainage and aeration are essential for a good yield.³

In areas where the soil has been tested and proven suitable for banana cultivation but the rainfall is insufficient, overhead irrigation and canal irrigation are practiced. However, this procedure is possible only where an enormous amount

¹United Fruit Company. "The Story of the Banana," p. 47.

²The Encyclopaedia Britannica. Volume III, 1910, p. 306.

³Reynolds, Philip Keep. op. cit., p. 65.

of water is readily accessible such as a river.

In addition to being produced in great quantities in Central and South America and the West Indies, they are grown in the moist tropical zones of Australia, Africa, and parts of Asia. They are also grown in the Canary Islands, Hawaiian Islands, Philippine Islands, Malay Archipelago, Fiji Islands, and numerous islands in the Pacific within the torrid zone.¹

Ideal conditions for banana cultivation are found on the Caribbean coastal regions of Central America. The area in this region extending several miles back from the coast is not more than 300 feet above sea level. The days are exceedingly hot; the nights are damp and cool and the rainfall ranges from 80 to 200 inches annually. In this area and in similar regions on the Pacific coast are the greatest banana farms in the world.²

"These lowlands were invaded about 1000 B. C. by the Mayan Indians, who established a remarkable empire lasting through many centuries. Despite the fact that these people cleared the heavy forest with stone axes and had no horses or other draught animals, they built - during the first six centuries of the Christian Era - splendid temples and public buildings. Some of their monuments are found today in Guatemala, Honduras and Mexico.

"After attaining a high state of civilization (they had a calendar superior to our own), the Mayas were presumably wiped out by war and disease and the jungle reclaimed the land. When, centuries later, Columbus discovered this region, it was sparsely populated by naked tribes ignorant of the higher arts.

"With few exceptions the early Soanish settlers shunned the unhealthy lowlands, "tierras calientes,"

¹Reynolds, Philip Keep. op. cit., p. 66-70.

²Ibid., p. 70.



bordering the seacoast and founded their colonies and missions on the higher lands of the interior. It is in these lowlands, the seat of an ancient empire, that the banana industry, created by American enterprise and capital, has applied sanitation and preventive medicine and established plantations."¹

Within the past fifty years, a gigantic agricultural industry, with its related interests of railways, docks, towns and villages, stores, hospitals, light plants, ice plants, and bakeries, has sprung up in regions formerly almost isolated and uninhabited. The Central American Republics may well be grateful that the banana industry introduced the most constructive development and progressive influence which have ever touched their shores.

Developing the New Plantation

In the pioneer days of Captain Lorenzo Baker we saw that the island of Jamaica bore the brunt of supplying the banana markets in the United States. It was early determined that Jamaica could not continue indefinitely to supply the increasing quantity of bananas being sold to United States markets. Many tropical agriculturists of that day believed that the rich, alluvial valleys of Central America were the best potential sources of supply to be found anywhere in the American tropics, or for that matter, anywhere in the world. However, at that time there were only a few small scattered clearings of banana fields along the shores and river banks of Central America. Practically all were in isolated regions

¹United Fruit Company. "The Story of the Banana," p. 18.

surrounded by swamps and jungles that bred only disease and misery. It was quite clear that if the banana trade was to succeed it would have to make its own land and to create land values where they had not previously existed and for that matter probably never would have existed. Not one of the Central American republics had developed any areas upon which a great banana industry could be founded. To make land suitable for agriculture meant that the pioneers had to reclaim it from jungle and swamp. There simply was no other way, and proof of their success is that today almost ninety per cent of all bananas in international trade are grown on reclaimed jungles and swamps.¹

"A modern banana plantation is a striking example of extensive farming, all the more impressive because of its setting of primeval jungle. In the transformation, within a few years, of an untamed wilderness of trees, palms, vines, ferns, and other tropical growth into a vast tract of cultivated land, there is a succession of steps which can scarcely be comprehended by those familiar only with farming operations in the temperate zone."²

The term "plantation," as used in this thesis, refers to a new tropical division in Central America created from virgin jungle, and consisting of a number of connected banana farms with the equipment necessary for their unified operation.³

Prior to actual operations in creating a new banana plantation in a particular region, there are many important factors that must first be taken into consideration. These

¹Wilson Charles Morrow. op. cit., p. 16.

²Reynolds, Philip Keep. op. cit., p. 71.

³United Fruit Company. "The Story of the Banana," p. 19.



are: soil, climate, rainfall, drainage, a shipping port, the risk of damage by uncontrollable floods and hurricanes, securing the necessary labor and supplying transportation facilities, principally railroads. Soil and climate play important roles in the cultivation of the banana. Soils should be deep, the best being clay and fine sandy loams with good drainage and low water table. Drainage is an important factor because the banana cannot live with saturated and soaked roots, yet the plant requires a great deal of moisture and an abundance of nitrogen. The ideal climate for banana cultivation is one devoid of extremes of temperature and with frequent light rains throughout the twelve months of the year. This ideal climate is seldom found in the principal banana-producing areas.¹ Because of this, man has to improvise. Proper drainage can be engineered and rainfall can be supplemented with irrigation only where an adequate water supply is available. Exceedingly hot temperatures are not injurious to the banana if humidity is high, but the plant will be chilled and its growth temporarily retarded if the temperature drops below 50° Fahrenheit.²

The area under consideration is first thoroughly explored by trained engineers, who study the contour of the land, location of swamp areas, drainage and control of malarial areas, the habits, depth, and currents of the coastal rivers with special attention given to effects of high tides and also possible

¹United States Department of Agriculture. Agriculture in the Americas, "Bananas in Wartime," April, 1945, p. 66.

²Ibid., p. 66.



floods on soil erosion, and measurement of rainfall. Soil experts take samples of the soil in various regions which in turn are sent to the United States to be analyzed.

After an area has been definitely decided as suitable for banana cultivation, the next step is to secure that tract in order that actual operations may commence.

Most of the development of the early banana industry in Central America had been based upon a legal instrument called the concession. This was a contractual agreement between a government and a corporation or an individual invariably specifying that in return for a particular investment, building, or service, the investor should receive certain concessions or rights from the government in whose jurisdiction the investment was to be made. Not all of the concessions were equitable, nor were all of them in the common interest.¹

In the early days, investigators and political agents of fruit companies, realizing the potential value for banana cultivation of prospective areas, induced Central American politicians by persuasion or otherwise, to facilitate the development of these areas by concessions which proved very favorable to the fruit companies but oppressive to the nations which gave them. Small countries, weak politically and undeveloped materially, over-anxious to stimulate agriculture and industry, captivated by visions of transcontinental railways,

¹Wilson, Charles Morrow. op. cit., p. 249-250.

and desirous of showing material results without much concern as to how these were to be paid for in the future, yielded readily to the enticements offered by the various fruit companies.¹

Frequently areas are leased from the governments concerned or from private individuals. As the years passed, the ethics of the trade in this respect has improved. As the 1920's ended, the majority of the banana lands had been purchased through the regular channels.²

After a particular area has been acquired, the land is surveyed, definite boundaries for farms are laid out, a wharf is constructed as are primary railroads, bridges, tramways, telephone lines, and labor camps. Next come the clearing of the underbrush, excavation of primary drainage ditches to drain the swamps, and finally, the actual planting. From the initial stage the plantation is gradually developed until it is producing regularly.

In the early days the coastal regions of Central America were sparsely inhabited. One of the most important problems confronting the early fruit companies was the securing of labor. The inhabitants of the cooler, Central American upland plateaus would not migrate to the coastal jungle regions, for they believed and they were correct in their beliefs, that the fever-infested jungles meant a certain and painful death.

¹Kepner and Soothill. op. cit., p. 38-40.

²Wilson, Charles Morrow. op. cit., p. 250.

Thus, as far as the securing of labor was concerned, it meant looking elsewhere. Most of the labor was secured from Jamaica and some of the other West Indian countries, principally Haiti. This recruiting of labor from the West Indies and also those from the Central American highlands who were willing to go to the banana regions, necessitated the offering of higher pay.

Keith, in his early banana ventures, drew his labor supply principally from Jamaica. In 1873 he recruited about 200 Italians from south Italy with a promise of a dollar a day and keep. Barely one hundred of them survived the ordeal on the Costa Rican Caribbean coast.¹ Thereafter, Keith relied principally on the Jamaicans who figured heavily in the construction of the Panama Canal, the Costa Rican railroad, and the Caribbean banana industry.² Many of them and their offspring are today living in the same areas, some still actively employed on the banana plantations. Practically all are found on the Caribbean side, few having migrated to the Pacific coast. Jamaican labor is generally considered to be very efficient, dependable, and trustworthy; in many cases they are preferred.

As the fruit companies, notably the United Fruit Company, lessened the menace of tropical fevers through health and sanitation activities, Central Americans from the cooler, drier, upland regions became increasingly willing to go to the banana

¹Wilson, Charles Morrow. *op. cit.*, p. 50-51.

²*Ibid.*, p. 50-51.

regions. In fact, so great has been their migration to the coastal regions in recent years that they resent very much the presence of foreign workers. As a consequence, legislation is being enacted in practically all Central American countries to curtail the influx of foreign workers. Today, as well as in the past, one finds banana employees representing practically every country in the world.

It is essential that an adequate supply of food and merchandise be made available to fill the needs of the workers who work on these vast plantations. We have already seen how Keith endeavored to secure additional revenue to finance his Costa Rican railroad through the establishment of commissaries. Today, the United Fruit Company maintains hundreds of commissaries throughout its extensive holdings. They have been established, not for the purpose of securing additional revenue, but rather, they have been set up and maintained for the benefit of the employees. Thus, the workers, as well as outsiders, are able to secure many, if not all, of the identical items we find on the shelves and counters in our own stores. Prices are nearly in all cases, a great deal lower than they can be purchased from any of the local Central American merchants. In addition, the United Fruit Company sells rice and beans to the lower classes (peons) at prices that are far lower than actual cost, the difference being absorbed in banana operations.

Hospital treatment must also be provided in event of malaria, sickness or accident. It is of the utmost importance

that general sanitary conditions be looked after. In any industry the welfare of its employees must be taken into consideration in order to maintain an efficient working force. In the banana industry this is of primary importance and an absolute "must."

A banana plantation consists of a number of farms accurately laid out when the land was originally surveyed. Each "finca" or farm is a separate unit similar to departments in a large manufacturing plant. Banana management is vitally interested in total production costs, by farms, which include amounts expended for salaries and wages, maintenance and harvesting costs, spraying, and irrigation costs.

A banana plantation is usually divided into Districts, each being placed in charge of a District Superintendent. Each district has an independent office in which are kept all records of banana production of the farms in its district. In most tropical divisions a Superintendent of Agriculture is in charge of all Districts. Each farm is headed by a "mandador" or overseer, with his assistants, timekeepers, foremen, stockmen, spraymen, and laborers. The entire plantation is a network of extensive railroads and tramlines, consisting of main lines and spurs. It is a regular beehive of activity, a small army of laborers continuously occupied with the many duties required on a banana plantation; hundreds of mules carrying bananas from the farms to the loading platforms on the railways. Mules are gradually being replaced by mechanized divisions in the newer

plantations such as at Golfito, on the Pacific coast of Costa Rica.

Speedy tractors, towing atthey carts, have reduced considerably the time required for "fruit-cuts." However, tractors can be used only where good roads have been constructed interlinking the farms. These roads, surfaced with gravel and crushed rock, while not super-highways, are superior to many of our own country highways. It is not an uncommon sight on a Sunday afternoon to see automobiles of several different makes cruising down the banana-flanked highways of the banana farms. Here again, it must not be overlooked that huge sums have been expended in constructing as well as maintaining these roads. Heavy rains wash out bridges and damage roads; high winds annually fell hundreds of banana trees across the roads making necessary a roadcrew to be on the alert and on the job continuously. Each farm must have good telephone communication with its district headquarters and with the division's central office usually located at the port of loading.

The main division office is in constant radio communication with the company's head offices in the United States and with the ships at sea en route to the banana ports. Success or failure depends upon the promptness and readiness of the fruit to be on hand at the wharf the moment the ship docks. This means the prompt distribution of "avisos" or fruit-cutting notices to the farms, the control of fruit deliveries, and the operation of fruit trains, all of which are handled by telephone.

In several cases, the Central American plantations are far-removed from the port of loading. In Guatemala, there is a fruit-haul of approximately 100 miles; in Costa Rica, the haul approximates 70 miles. The Guatemalan banana plantations are located in the western section of the country, but are loaded at the Caribbean port of Puerto Barrios. In Costa Rica, mountains separate the coastal port of Golfito from the inland plantation areas.

Every effort is made to have the bananas reach the loading port shortly before the ship docks or when it is ready to receive them. No time is lost once loading commences, continuing day and night until completed. Every effort is made to have the fruit loaded in the shortest possible time, not only due to the nature of the cargo, but there are also fines for detaining ships, principally - demurrage charges. The entire operation constitutes a most intricate example of organization and attention to detail.

Planting

After the preliminary work has been completed, such as the draining of swamp areas, a large clearing-gang clears the undergrowth. Lining and staking then follow which consists in merely laying out and marking the land with stakes at intervals where the banana bits or roots weighing from three to four pounds each are to be planted in holes about twelve inches deep. The procedure is the same as laying out a orchard. The distance between stakes which in reality means the distance

between banana trees, varies according to soil and climatic conditions. It is of interest to note that in Central America, as noted earlier, the average height of a banana tree is from 18 to 25 feet and in Cuba from 12 to 15 feet; consequently, in Central America, the planting distance is usually from 15 to 18 feet each way, and in Cuba and the West Indies the planting distance is 11 to 14 feet.¹

Cultivation

Usually, if the area requires irrigation, all the trees are removed and burned at the same time the undergrowth is removed after which lining, staking, and planting follow in that order. If irrigation is not necessary, then the logs, branches, and undergrowth are allowed to remain on the ground, and instead of being destructive, actually furnish good fertilizer for an already rich fertile soil. The hot, humid atmosphere and an abundance of fungous and bacterial organisms readily decomposes the logs and branches and adds humus to the soil.

Something like three months after planting, the farm is usually given its first "cleaning"; a gang of peons are equipped with machetes and are directed to clear the weeds and other tropical growth. This operation, like underbrushing, is quite dangerous and the compensation of 12 to 15 cents per hour seems small when the risks involved are taken into consideration.

¹United Fruit Company. "The Story of the Banana," p. 21.

At the time of underbrushing, the land is virgin jungle, infested with deadly snakes, wild animals, malaria mosquitos, and many other hidden enemies. Thus, it is not difficult to understand why hospital facilities are among the first to be set up in developing the new plantation.

Every three or four months the "cleaning" process is repeated, and any banana bit failing to come up is replaced by a new one. Merely planting and performing the necessary intermittent cleaning does not mean that the work of the plantation is finished. There is a great deal of work that must go on with or soon after the planting. Bananas bear fruit 12 to 15 months after planting; consequently, the necessary means must be effected to harvest the fruit. As banana plantations are established on virgin jungle areas, the operations may be either a few or many miles from any settled localities. Railways and tramlines must be laid not only to take out the fruit, but also in order to bring in supplies and construction material. Labor camps for the laborers and quarters and homes for the first-class salaried employees and their families must be erected, and clearings made for pastures for work animals.

After the construction period has passed, a large force of laborers is constantly required for maintenance work. Heavy and irregular rainfalls interrupts both farm and construction work. Windstorms, not exceeding 20 to 30 miles per hour can turn the most promising outlook into disaster overnight. Floods and droughts are equally destructive. Roadbeds and bridges

may be washed out; a hurricane may level an entire plantation thereby destroying millions of stems in one plantation alone. Ravages of insect pests can destroy a banana farm overnight. In order that the home offices in the United States may know the status of available fruit at all times, it is an absolute rule that tropical divisions radio their home offices weekly estimates of available fruit, available meaning - ready to cut for shipment. This enables the home offices to dispatch their ships accordingly with a minimum of expense and delay.

The average annual banana production per acre in Central America is 175 to 225 stems, and 200 to 300 stems in Jamaica where cultivation methods are carried out more intensively. Production figures vary according to soil, climatic conditions, and the methods of cultivation used.

Harvesting

The weekly cables of available fruit form the basis of setting up tentative ship schedules. Occasionally, tropical storms destroy fruit supplies in one division; this necessitates the changing of schedules, and ships are dispatched to other banana ports which are able to supply the fruit. Thus, one can readily understand the importance of constant communication between the home office, the ships at sea, and the tropical ports. When a banana ship is dispatched from a United States port, cutting orders are transmitted by radio from the main office to the division office well in advance of the arrival of the ship at the tropical port. The ships are always

in direct contact with the banana ports as delays due to bad weather and fog frequently hold up the ships' progress. Consequently, fruit cuts usually do not commence more than 24 hours ahead of the expected arrival of a ship.

Contrast the modern communication methods with that used in the days of the banana pioneers:

"Urgent communications from company offices in the United States were first telegraphed to Galveston, Texas; then they were dispatched by cable (usually out of order) via Mexico to San Juan del Sur, Nicaragua; here the messages were transferred to land lines owned and operated by the Nicaraguan government; after much delay, land lines owned and operated by the government of Costa Rica picked up the communications. The latter systems were frequently out of order and, when strife or ill will prevailed between Nicaragua and Costa Rica or the staffs of their respective national telegraph systems, the messages never crossed the boundary at all. But when and if the messages reached Costa Rica's capital, they were dispatched by United Fruit land lines to the Limon headquarters, and then by Carib "cayucos" down the reef-strewn coast to Almirante Bay and Bocas."¹

"The profitable harvest of bananas also involves rapid communication between domestic offices and the remote jungle-girded plantations. Many trainloads of bananas are required to load even a small ship. Time after time, messages advising the Bocas del Toro manager of the expected arrival of a ship, or of delays or changes of ships' schedules, were not received until tens of thousands of bunches of bananas had been reaped. Trainloads of bananas, cut and hauled to seaboard on the assumption that a ship would arrive within a few hours of its scheduled time, would be left to spoil on sidings or in yards. Almost as frequently, when land lines broke down, or Carib canoes capsized, a ship would pull into port and the local manager would have received no previous word of her arrival. In such a case, the ship would have to wait in port for several days, sometimes for several weeks, until the bananas could be reaped and brought to the seaboard. That resulted in a series of enormous financial losses as the ship reached each succeeding port far behind schedule."²

¹Wilson, Charles Morrow. op. cit., p. 154.

²Ibid., p. 155.

Fruit cuts are based on the carrying capacity of the ship as well as the estimated quantity of available fruit of the required grade. Each farm "mandador" receives his cutting instructions from the central office and in turn gives his instructions to his force of cutters. Cutters equipped with long poles with sharp knives affixed on the ends, cut the banana tree just below the stem which causes the tree to bend downward. The stem is cut and is then carried immediately to the nearest tramline or packroad either by a peon laborer or by a mule. In the newer divisions, mules are being replaced to some extent by tractors. In the last cutting operation, the tree is cut down near the base. It is neither burned nor carried off; it quickly rots and becomes excellent fertilizer.

To the Loading Port

After cutting, the fruit is transported to the nearest railroad loading platform. This haul is comparatively short as the modern banana plantation today has many miles of spur track branching out to every section of the farm.

At the loading platform, each stem of fruit is "washed." The stem is dipped several times into a vat filled with muriatic acid solution which washes the fruit free of insects and other foreign particles. The fruit is immediately loaded on banana cars which are picked up one by one by powerful locomotives, eventually forming a long banana train of from 20 to 40 cars. When the banana train reaches the loading

port, the cars are switched to the dock.

Loading the Banana Cargo

The moment the first train of fruit reaches the wharf, loading commences and continues day and night until completed. Cutting orders and the careful dispatching of trains are so synchronized that a continuous flow of fruit is practically never interrupted. Hourly rates of loading average between three to seven thousand stems per hour, depending upon weather conditions, type of labor and method of compensation used. Heavy swells frequently snap mooring cables. Jamaican and Nicaraguan labor are usually considered superior in efficiency and willingness to work. Hourly rates of compensation slow down loading while rates per stem carried from the banana car to the banana conveyor spurs the worker on to higher wages. Under exceptionally good conditions a cargo of 85,000 stems can be loaded in from 13 to 16 hours.

The fruit is inspected as it is taken from the banana car; if it shows any excessive fulness or thinness or the slightest trace of yellow it is rejected. Those that pass this last rigid inspection test are counted and placed in the canvas pockets of the conveyors which carry them into the holds of the ship. The fruit is carefully stowed on end in the refrigerated compartments and bins by classes. After the loading is completed, stowage plans are prepared showing the location and quantity of the different classes.

At the port of destination, stevedores board the ship

carrying copies of the stowage plans which enables them to facilitate the proper discharge of the cargo. In the pioneer days of the industry, bananas were stowed on board in every conceivable place, in the holds, on deck, and even in vacant cabins. Today, deckloads on the modern refrigerated ships are rare; however, during the late war deckloads were carried due to the shortage of shipping facilities.

The modern banana ships embody the newest developments in marine construction, including the latest safety devices to insure safety at sea.

"The effect of geographic factors on tropical shipping is seen most clearly in the fruit ships. These vessels have a value for our trade in excess of their numbers. They maintain regular communications with our small neighbors to the south. Carrying mail and passengers, they make possible a constant exchange of ideas and business details. They give an assured outlet for the tropical produce of the Caribbean and make it possible for northern articles to be obtained in exchange."¹

Marketing

No attempt will be made to describe the procedure used in marketing the banana. The scope of this thesis is limited to the banana in Middle America, from production to the moment actually loaded on the ships bound for the markets of the world. Suffice it to say that because of their perishable nature, bananas must be distributed and sold without delay. In short, most of the bananas imported to the United States are marketed through sales branches located in all the

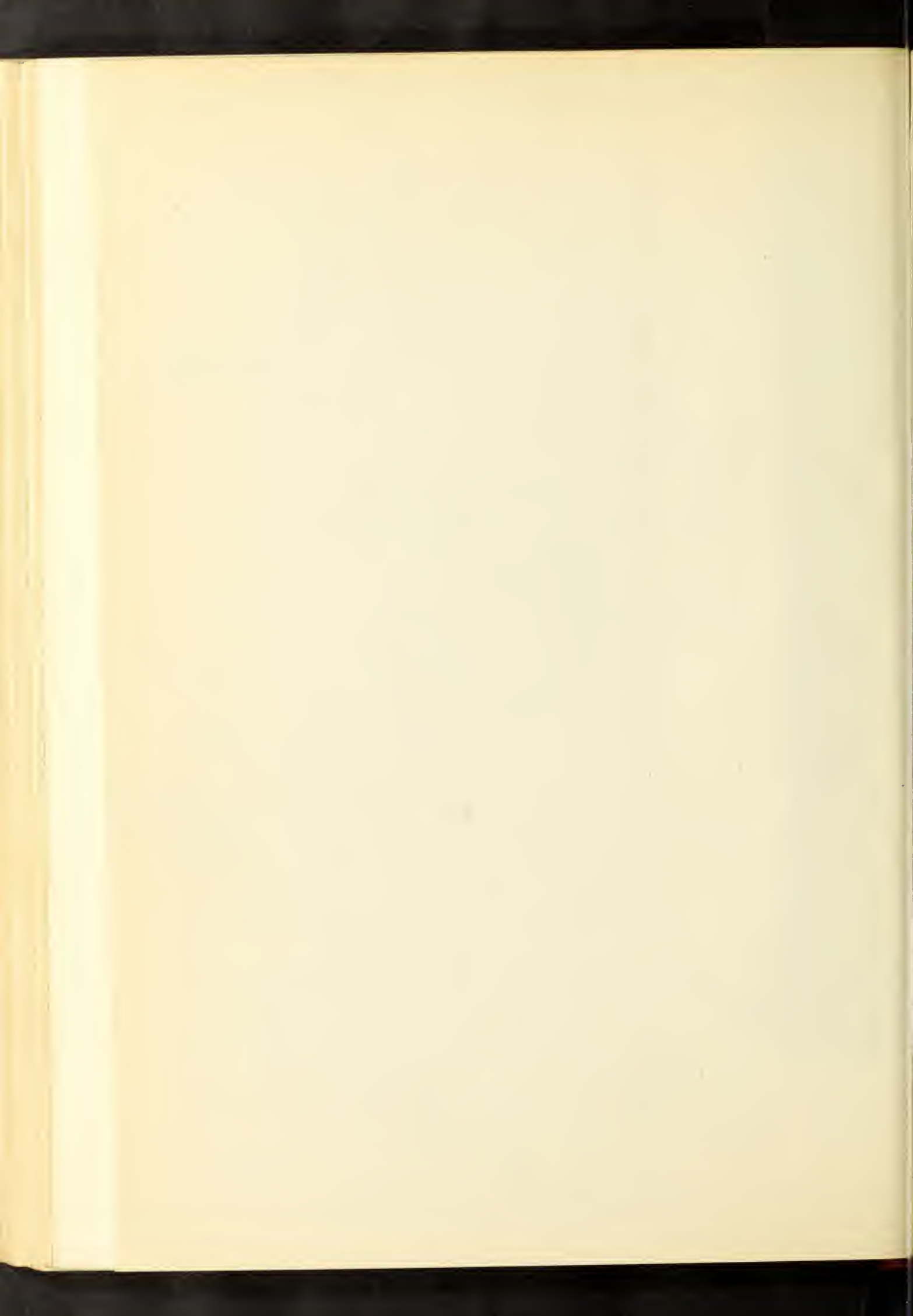
¹Reynolds, Philip Keep. op. cit., p. 89.

larger cities of the nation. Bananas produced by the United Fruit Company are sold in the United States by the Fruit Dispatch Company, a subsidiary of the United Fruit Company. In Canada, sales are made by the Canadian Banana Company, Limited. Sales in Great Britain and in Europe are handled by Elders & Fyffes, Limited, a subsidiary of the United Fruit Company.

The distribution of bananas in the United States is, in general, as follows: importations at northern Atlantic ports are distributed mainly in the eastern states, the area north of the Ohio River and North Carolina, as far west as Columbus, Toledo, and Detroit. Importations at Gulf ports, New Orleans, Jacksonville, and Charleston are distributed throughout the southeast, south of the Ohio River and Virginia, also the Central West, including a portion of the great region lying west and north of the Mississippi River. Importations at Pacific Coast ports, Los Angeles, San Francisco and Seattle, are distributed throughout the West Coast area. Bananas are also shipped by rail from Mexico through Texas and Arizona. Canadian imports go directly to the eastern ports of St. John, Halifax and Montreal, and the Pacific ports of Victoria and Vancouver. In the summer months the banana finds its way to Norway and Sweden and even points beyond the Arctic Circle.¹

¹United Fruit Company. "The Story of the Banana," p. 41.





PART IV - A GEO-ECONOMIC STUDY OF THE PRINCIPAL
BANANA PRODUCING AREAS IN
CENTRAL AMERICA

Geo-Economy Defined

"Geo-Economy has been used in recent times to define the economic life of a nation within the spheres of its climate, topography, the extent and location of natural resources, population and racial groupings, control of land area. All these profoundly affect the living habits of a people. Out of their adjustment to these factors comes a flourishing or declining economy."¹

Central America, as well as Latin America as a whole, constitutes one of the most complex studies in this connection. Like our own population, Central America's population consists of many nationals migrating from all corners of the globe. Many of these nationals settled with the native Indian tribes, and their ensuing inter-marriages with the native Indians formed a new race known as "Mestizos." Central America's climate and topography are of wide extent; its varied natural resources are subject to a great future development.²

The tables on the following pages have been included to point out some of the physical assets with which the principal banana producing countries of Central America are entering the post-war period. They have been set up in comparative form in order to indicate the intensity of economic concentration or expansion already present in each of the six areas.

¹Dun & Bradstreet, Foreign Sales and Research Department. "A Geo-Economic Study of Latin-America," 1945, p. 5.

²Ibid., p. 5.

TABLE I. POPULATION, AREA, AND DENSITY OF POPULATION
OF THE CENTRAL AMERICAN REPUBLICS

Republic	Year	Population	Area - Square Miles	Population Per Square Mile
Costa Rica ^a	1945	746,535	19,283	38.71
Guatemala ^b	1943	3,451,000	42,364	81.46
Honduras ^c	1943	1,173,032	59,160	19.83
Br. Honduras ^d	1947	60,000	8,600	7.00
Nicaragua ^c	1943	1,048,603	57,144	18.35
Panama ^c	1940	631,637	28,575	22.10

^aUnited States Department of Commerce. International Reference Service; Volume 4, Number 10, May, 1947, "Costa Rica - Summary of Current Economic Information," p. 1-2.

^bUnited States Tariff Commission, "Economic Controls and Commercial Policy in Guatemala," 1947, p. 1.

^cThe Office of Inter-American Affairs, "Handbook of Latin American Population Data," January, 1945, p. 1.

^dAmerican Consulate; Belize, British Honduras, April, 1946. Report on General Information, revised population statistics for 1947.

Reliable, current, statistical data as to population is not readily available. Unofficial current estimates may be even higher than that given in Table I. The figures given in Table I are, however, the latest official population statistics as compiled by the various statistical bureaus of the Central American Republics as well as compilations by the United States Government agencies. Since population statistics vary in the method and year of census, Table II represents an approximate analysis of the population distribution.

TABLE II. COMPARATIVE ANALYSIS OF RACIAL GROUPS IN CENTRAL AMERICA^a

In Percentages of Total Population

Country	Whites	Mestizos	Indians	Negroes and Other Races
Costa Rica	80.3	14.6	.8	4.3
Guatemala	10.0	56.0	34.0	-
Honduras	1.0	86.0	10.0	3.0
Br. Honduras	4.0	16.0	32.0	48.0
Nicaragua	17.0	68.0	-	15.0
Panama	12.0	40.0	7.0	41.0

^aDun & Bradstreet, Inc., "A Geo-Economic Study of Latin-America," 1945, p. 6.

TABLE III. TRANSPORTATION FACILITIES IN CENTRAL AMERICA

Country	Mileages of:		Census of Motor Vehicles ^a	No. of Major Ports	Air-Lines
	Railroads	Highways			
Costa Rica	601 ^c	797 ^b	4300	4	4
Guatemala	483 ^c	4393 ^d	4338	3	4
Honduras	560 ^c	1000 ^h	1208	3	4
Br. Honduras	44 ^c	230 ^e	362	1	2
Nicaragua	230	1000	558	3	5 ^f
Panama and Canal Zone	458	1090	18722	6	6

^aDun & Bradstreet. "A Geo-Economic Study of Latin-America," p. 29.

^bUnited States Department of Commerce. International Reference Service; Volume 4, Number 10, May, 1947, "Costa Rica - Summary of Current Economic Information," p. 2.

^cDun & Bradstreet. op. cit., p. 29.

^dUnited States Department of Commerce. International Reference Service; Volume 5, Number 5, January, 1948, "Economic Review of Guatemala in 1946," p. 8.

^eAmerican Consulate; Belize, British Honduras, April, 1946, "General Information - American Consular District of British Honduras," p. 2.

^fUnited States Department of Commerce. International Reference Service; Volume 4, Number 6, April, 1947, "Nicaragua - Summary of Current Economic Information," p. 2.

^gThe Foreign Service of the United States of America, American Embassy; Panama, Republic of Panama. "Panama - Summary of Economic Information, 1945-1946," p. 2.

^hThe Encyclopedia Americana, 1946 Edition; Volume 14, p. 352.

Mileages of railroads as reported in Table III, page 61, refer to the common carrier class, and highways are the all-weather type. Airlines serving the countries consist of domestic lines as well as international lines.

TABLE IV. PERCENTAGE OF LITERACY^a

Country	Reference Year	Percentage	Base Age
Costa Rica	1941	82.0	Total
Guatemala	1943	32.6	Over 7 yrs. of age
Honduras	1942	52.5	Over 7 yrs. of age
Br. Honduras	1940	No Data	
Nicaragua	1941	30.0	Total
Panama and Canal Zone	1942	64.7	Over 10 yrs. of age

^aDun & Bradstreet. op. cit., p. 14.

TABLE V. EDUCATIONAL FACILITIES^a

Country	Primary Schools	Enroll- ment	Intermedi- ate Schools	Enroll- ment	Universi- ties	Enroll- ment
Costa Rica	761	73,217	49	7251	11	820
Guatemala	2520	140,736	69	6552	1	594
Honduras	1083	55,567	18	2544	1	378
Br. Honduras	118	11,968	5	600	-	-
Nicaragua	648	61,000	28	1181	3	413
Panama and Canal Zone	670	74,039	29	8407	1	857

^aDun & Bradstreet. op. cit., p. 17.

TABLE VI. COMMUNICATION FACILITIES^a

Country	No. of Broadcasting Stations	No. of Tele- phones	No. of Telegraph Offices	Radio Sets
Costa Rica	28 ^b	5,646	295	25,000
Guatemala	5	3,466	235	40,000
Honduras	3	4,948	285	11,800
Br. Honduras	1	433	32	1,000
Nicaragua	10 ^c	1,804	130	6,000
Panama and Canal Zone	11	16,000	33	26,100

^aDun & Bradstreet. op. cit., p. 19, 21, 23, 25.

^bUnited States Department of Commerce. International Reference Service; Volume 4, Number 10, May, 1947, "Costa Rica - Summary of Current Economic Information," p. 3.

^cAmerican Embassy; Managua, Nicaragua, "Summary of Economic Information - Nicaragua, 1945-1946," p. 2.

The data concerning telephone sets include those used by Central American government systems as well as by privately owned companies. Private systems in operation on plantations constitute an appreciable number of the sets in use.¹

TABLE VII. APPROXIMATE DAILY AVERAGE CIRCULATION OF NEWSPAPERS AND MAGAZINES^a

Country	Newspapers	Magazines
Costa Rica	42,000	7,500
Guatemala	24,833	*
Honduras	17,000	9,200
Br. Honduras	*	*
Nicaragua	9,000	8,000
Panama and Canal Zone	56,000	*

(* No data available)

^aDun & Bradstreet. op. cit., p. 23.

TABLE VIII. ECONOMIC FUNCTION OF CHIEF CITIES^a
In Percentages

Country	Commercial	Industri- al	Agric- cultural	Mining
Costa Rica	43.5	4.3	52.2	-
Guatemala	38.0	9.8	51.0	1.2
Honduras	30.0	6.5	57.0	6.5
Br. Honduras	39.0	16.5	44.5	-
Nicaragua	23.6	7.9	52.5	16.0
Panama and Canal Zone	57.0	8.5	38.5	-

^aDun & Bradstreet. op. cit., p. 38.

¹Dun & Bradstreet. op. cit., p. 24.



From the standpoint of the United States, Latin America is divided into three trade areas as follows: the Caribbean area, the east coast of South America, and the west coast of South America. The largest proportion of our Latin-American trade is with the Caribbean area, which in 1938 took almost 59 per cent of our total Latin-American exports, while our imports from the Caribbean area totaled 48 per cent of all imports from the entire Latin-American area. The fact that the Caribbean countries ship most of their exports to us and buy most of their imports from us makes this area most important in our trade. The dependence of Caribbean countries on one or two crops and the lack of economic diversification compels these countries to import a large proportion of their goods and food.¹ One factor having much to do with the success of the banana industry in Central America was that in the process of building up foreign commerce throughout these areas, in carrying to the ports of these countries goods manufactured in the United States, the ships of the banana trade were always assured of a northbound cargo of fruit.

The United States is the world's largest banana importer. In prewar years our banana imports were exceeded in value only by the importations of coffee and sugar. Latin America has supplied 99 per cent of the total banana imports to the United States for at least 15 years,² and until shipping facilities

¹Horn, Paul V. "International Trade Principles and Practices," p. 418-419.

²U. S. Department of Commerce. Industrial Reference Service; Volume 4, Part 5, Number 2, February, 1946, "Bananas," p. 2.



were drastically reduced during the late war, a steady supply of fruit was always available (refer to Table IX page 67).

"Jamaica, Mexico, Honduras, Guatemala, Colombia, Brazil, Panama, Cuba, Costa Rica, and Nicaragua were the world's largest exporters of bananas in the Western Hemisphere in prewar days, supplying more than 100,000,000 stems a year, or almost 85 percent of the world's banana exports. Principal exporting areas in other parts of the world were the Canary Islands and Formosa. Of lesser importance were Hawaii, Samoa, Fiji, and Cook Islands, and various countries in equatorial Africa.

"Perhaps no Latin-American industry has suffered more from war conditions than the banana industry. The continental European market was virtually closed in 1939, and the United Kingdom, which took most of Jamaica's production, stopped importing bananas late in 1940. This left the United States as the only large market, and after this country entered the war in December, 1941, our imports were drastically reduced. The great fleet of refrigerating boats which had plied between Central and South American ports and the world's two largest banana ports - New Orleans and New York City - were put to more strategic uses than bringing fruit to the United States.

"At the beginning of 1942, the lack of markets, shortage of chemicals for spraying material and particularly the dearth of shipping facilities brought the industry to a standstill. Regardless of hardships suffered during the war years, however, the large banana companies in the main producing countries of Central and South America have managed to keep the plantations alive, even though many of the workers have left for better paid work and some of the small growers have turned to the production of other foodstuffs."¹

During the late war bananas were probably the major surplus crop in Tropical America with sugar and its derivatives a second.²

¹Foreign Commerce Weekly. "Banana Trade is on the Upswing," Alice J. Muller, March 24, 1945, p. 11.

²Pan American Union. "Effects of the War on Latin American Agriculture," Lawrence W. Witt, June, 1943, p. 245.



TABLE IX. BANANAS, GREEN OR RIPE - IMPORTS FOR CONSUMPTION INTO THE UNITED STATES, 1935-46
(Thousand bunches)

Country of origin	Average 1935-39	1940	1941	1942	1943	1944	1945	1946
Mexico	14,815	6,614	4,803	5,276	7,852	6,097	5,464	8,251
Honduras	10,710	14,619	12,918	6,875	6,007	10,606	11,737	10,247
Guatemala	7,967	8,227	7,107	5,047	2,739	4,397	8,034	10,170
Panama, Republic of	6,740	5,908	5,734	1,885	841	1,138	1,641	3,523
Panama Canal Zone	(1)	196	97	8	43	31	896	967
Cuba	5,894	4,375	3,696	2,301	2,567	2,573	2,618	4,392
Costa Rica	3,640	3,334	5,438	2,396	2,731	2,073	2,743	5,322
Colombia	3,614	2,274	2,265	187		423	1,382	1,902
Nicaragua	2,272	1,162	794	64		1	80	287
Haiti	1,193	3,106	3,864	1,176	958	3,395	4,284	6,574
Ecuador	1,159	878	637	211	80			450
British Honduras	637	608	350	147	33	191	158	120
Jamaica	282	169	2,777	817	66	159	124	188
Dominican Republic	277	652	868	672	755	442	1,084	1,328
Other British West Indies	24	9	18		5			
Venezuela	18	27	25	4				30
Canada	10							
Brazil	2		34					
French West Indies	2	178	237	104	51	160	708	182
Trinidad and Tobago	(2)							
Belgian Congo				29				
Total	59,256	52,336	51,662	27,199	24,729	31,686	40,953	57,933

¹Panama Canal Zone included in average 1935-39.

²Less than 500 pounds.

(From U. S. Department of Commerce. Industrial Reference Service.

Imports 1935 to 1944 inclusive; refer Volume 4, Part 5, February, 1946, p. 4.
Imports 1945 and 1946 refer to Volume 5, Part 5, August, 1947, Number 28, p. 1.



During 1944 imports of bananas reached the highest point of any full year following Pearl Harbor, but still showed a decline of 44.5 per cent from the 1939-1941 average. Approximately 33.5 per cent of 1944 imports were from Honduras, 19.2 per cent from Mexico, 13.9 per cent from Guatemala, and 10.7 per cent from Haiti. The remainder came from Cuba, the Republic of Panama, and other countries.¹

Since this study is limited to the banana in the economy of the principal banana producing countries of Central America, attention will now be directed to a geo-economic study of these countries including banana production and trade of each of the areas.

Costa Rica

Costa Rica with an area of 19,283 square miles (see Table I page 60) is the third smallest Republic of Central America, being slightly larger than the States of Vermont and New Hampshire combined. It is bounded on the north by Nicaragua, on the east by the Caribbean Sea and Panama, on the south and west by the Pacific Ocean. The country extends approximately 275 miles along its central mountain range. Its maximum width is 150 miles. The Caribbean coastline, comparatively regular, extends for 120 miles, while the irregular Pacific coastline has a length of 360 miles.²

The topography of the country is uneven and divides the

¹Foreign Commerce Weekly. "Statistical Whys and Wherefores of the Banana Situation," June 16, 1945, p. 46.

²The Foreign Service of the United States of America. American Embassy; San Jose, Costa Rica, "Costa Rica," 1945-1946, p. 1.



country into three natural regions: the Caribbean coastal plain, the central mountain range, and the Pacific slope. The Caribbean coastal plain is covered with dense forests and for the most part fairly flat. It is in this region, Limon Province, that some of the world's largest banana plantations were first located. On the Pacific slope are rolling hills as well as some very fertile areas.

Due to soil-exhaustion and Panama disease in the Caribbean regions, the banana industry has shifted from the Caribbean coastal area to the Pacific slope. Panama disease, also known as the "wilt," is a disease that attacks the roots of the plant and eventually destroys the plant.

Costa Rica has three climatic zones. The torrid zone, or hot zone, in which are found the extensive banana plantations, includes the coastal and northern river plains, and has a maximum altitude of 3,000 feet. Rainfall is heavy, particularly on the Caribbean side. The temperature ranges from 77° to 100° Fahrenheit. The temperate zone includes the central valleys and plateaus varying in altitude from 3,000 to 6,000 feet with heavy rains from April to November, and a temperature range of 59° to 77° Fahrenheit. The cold zone includes those areas over 6,000 feet with a range in temperature from 41° or less to 59° Fahrenheit. The region is very windy and the rainfall is not as heavy as in other regions. The average annual rainfall for Costa Rica as a whole approximates 100 inches. San Jose, the capital city with a population of



79,613,¹ is located in the temperate zone lying in a broad and very fertile plateau between the two mountain ranges of the central range.

The country's population (see Table I page 60) is concentrated chiefly in the healthful plateaus, approximately seventy per cent of the population living in the Provinces of San Jose, Alajuela, and Cartago. The three provinces named constitute about one-third of the total area of the country. It is estimated that eighty per cent of the total population are of European descent (see Table II page 61), many being of pure Spanish blood.

The number of Indians is decreasing; in 1937 it was estimated that there were 4,000 in the country. Approximately 22,000 Negroes, principally from the British West Indies, inhabit the Caribbean coast where a good percentage are employed on the banana plantations in that area. Approximately fifty per cent of the laborers in the banana industry are native Costa Ricans, the balance consisting of the West Indian Negroes and others of near by countries. The influx of West Indians is looked upon as a detriment to the Republic, in that those who do not become permanent residents are held to take money out of the country, and those who do remain contribute an unwelcome racial factor to the population.²

¹United States Department of Commerce. International Reference Service; Volume 4, Number 10, May, 1947, "Costa Rica - Summary of Current Economic Information," p. 1-4.

²Jones, Chester Lloyd. "The Caribbean Since 1900," p. 366.



Spanish is the chief language of Costa Rica, but because of the large number of West Indians on the Caribbean coast, English is widely spoken. Comparatively few of the Negroes have migrated to the Pacific coast, apparently preferring to remain in the areas where they had aided Minor C. Keith in his railroad and banana ventures. Mass migration by the Negroes from the Caribbean coast to the Pacific is not generally encouraged by the Costa Ricans, which is one of the reasons why the Negroes have chosen to remain on the Caribbean side.

The relations with the banana producers, the railway companies - representing the same interests to some extent, and also the power companies, all of which are largely in the hands of foreign interests, are an almost constant subject of discussion and debate by the Costa Rican Congress and the press, centering chiefly around the question of export duties and labor demands. The Costa Rican Government has had conflicting impulses in the development of its policies toward the banana industry. Similar to the governments of the other banana producing republics, Costa Rica has not felt free to demand higher export duties because higher duties would tend to discourage production and drive the industry elsewhere.

In December, 1945 Costa Rica had 797 miles of highways (see Table III page 61). Approximately 630 miles were hard-surfaced, the remainder being improved earth and ballasted roads. Dirt tracks and trails approximate an additional 3,100



miles. Due to the relatively small mileage of railroads, the country depends heavily upon its highways and roads.¹

The railroad system in Costa Rica consists of four short railroads with a total of 601 miles (see Table III page 61). The Ferrocarril Electrico al Pacifico, an electric line, is owned by the Government connecting San Jose and the Pacific port of Puntarenas, a distance of approximately 100 miles. The Northern Railway which is operated by British interests, connects San Jose with Limon, a distance of approximately 100 miles. The Ferrocarril del Sur and the Ferrocarril de Quepos, owned and operated by the United Fruit Company, are located in the Pacific Province of Puntarenas.

It is interesting to note that of the 601 miles of track in the country, 221 miles representing the two lines referred to are owned exclusively by the United Fruit Company for banana cultivation purposes. An additional 87 miles of tramways are owned by the United Fruit Company in its banana operations in Limon Province.² Every mile of track owned by the United Fruit Company was constructed in areas that were formerly virgin jungle lands. Operation and maintenance personnel of the railroads are predominantly Costa Rican.

At the present time the United Fruit Company is constructing an additional railroad in the Coto Valley where it will

¹United States Department of Commerce. International Reference Service; Volume 4, Number 10, May, 1947, "Costa Rica - Summary of Current Economic Information," p. 2.

²United Fruit Company. "Forty-Seventh Annual Report to the Stockholders of the United Fruit Company for the Fiscal Year 1946," p. 18.



eventually extend its railroad originating at Golfito to the Panamanian border to connect with the line running to Puerto Armuelles, Panama which is also a United Fruit Company port and banana division. Thus, the banana industry will give Costa Rica and Panama their second international railroad, the other being located on the Caribbean side, also developed by the United Fruit Company in its banana cultivations in that region.

Costa Rica is served by several airlines. The Compania Bananera de Costa Rica (United Fruit Company) operates a private service with several planes between its Caribbean and Pacific coast divisions transporting passengers and freight. So important have the banana divisions become in Costa Rica that three other airlines have recently established local lines with regular mail, freight, and passenger service to the banana regions. They are: Pan American Airways, Transportes Aereos Centro Americanos, and Transportes Aereos Nacional.

There are four major seaports in Costa Rica of which three owe their founding and development to the banana industry. The Caribbean port of Limon was originally founded as a banana port through Keith's operations; two others, Golfito and Quepos on the Pacific coast, are today almost exclusively banana ports. The fourth, the Pacific port of Puntarenas, is an old port handling chiefly freight and other cargoes. In its early history Puntarenas also handled a quantity of banana shipments.

Agriculture is the predominant industry in Costa Rica;



there are relatively few mining and manufacturing industries. The principal export crops are coffee, bananas, and cacao. Other crops grown principally for home consumption are sugar, rice, beans, corn, tobacco, and potatoes. In addition, Costa Rica grows an abundance of other tropical fruits and vegetables.

Many of the Costa Ricans own their land, large estates being relatively few in number. Approximately one-fifth of the country's total area is agricultural land, however, only about seven per cent is being farmed at present.¹ Where foreign interests control the banana industry and approximately one-half of the cacao industry, more than ninety per cent of the coffee farms and plantations belong to individual Costa Ricans.²

In terms of value, coffee is the leading export crop. Bananas closely follow coffee in export value, ranking second in importance in Costa Rica's economy. Among agricultural activities for domestic consumption, sugar cane ranks first followed by the cattle industry.

One of Costa Rica's most serious economic problems since the outbreak of the war has been the rise in the cost of living. The upward trend of prices started in 1941 and was sharply accentuated during 1942. By the end of 1944, the official San Jose index of the cost of living was 70 per cent higher than

¹United States Department of Commerce. International Reference Service; Volume 4, Number 10, May, 1947, "Costa Rica - Summary of Current Economic Information," p. 2.

²Ibid., p. 2.

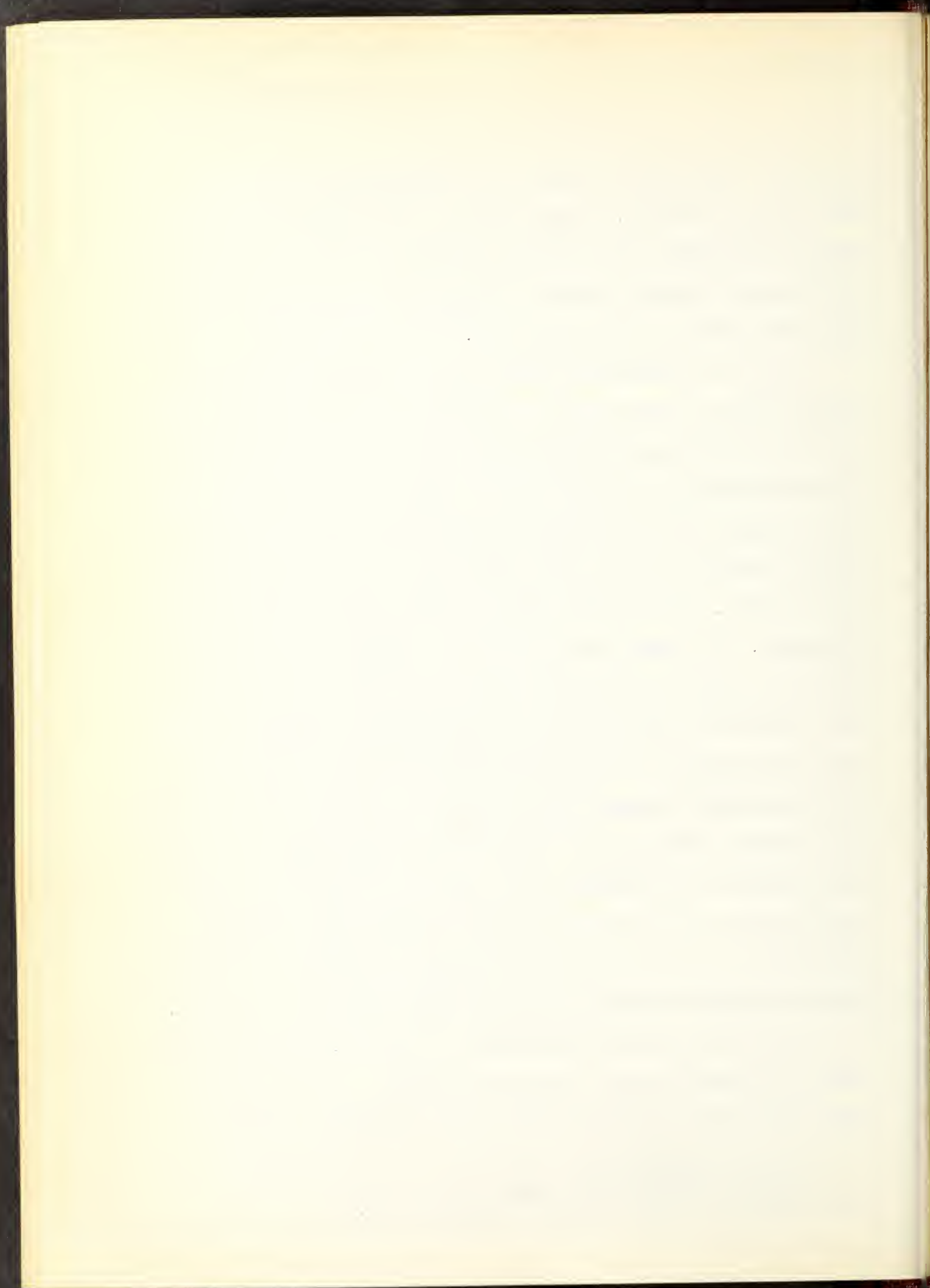


in 1939. There were a number of contributing factors to this price situation. Higher wages, increased expenditures by the Government, and projects financed by United States procurement agencies greatly increased the purchasing power of a large part of the population.¹

Due to the submarine menace in the Caribbean in the early stages of the late war, intensive construction operations on the Pan American Highway project were commenced in 1942. Enticed by the much higher wages offered the Costa Ricans by several United States highway construction companies, the banana industry in Costa Rica lost most of its agricultural labor supply. With higher wages, prices skyrocketed almost overnight. By 1946, the shortage of agricultural labor was relieved somewhat by the employment of workers who had been laid off after operations on the Pan American Highway ceased and by the influx of Nicaraguans and Hondurans flown in by the United Fruit Company for employment on Costa Rica's Pacific coast banana plantations. Costa Rica's dependence to a very large extent on its banana trade can be more readily understood by the act of the Government of Costa Rica granting permission to the United Fruit Company to bring in foreigners by the hundreds to keep the banana plantations in operation.

From 1875 to 1890 cultivation of Minor C. Keith's banana farms in Limon Province increased rapidly. In 1890 exports from this region totaled to more than 1,000,000 stems; in

¹United States Tariff Commission. "Economic Controls and Commercial Policy in Costa Rica," p. 21.



1910 exports had risen to over 9,000,000 stems, and in 1913 the peak was reached when more than 11,000,000 stems were exported.¹ Since that date the trend has been downward (see Table X page 77). Shipments in 1944 were the lowest in the past 20 years.

Before 1941, Limon Province had been the chief source of supply. Soil exhaustion, sigatoka, and Panama disease gradually reduced production until by 1941 more bananas were exported from the Pacific coast divisions of Quepos and Golfito than from Limon. Experiments, surveys, and plantings had been made at Quepos and Golfito as early as 1934. With the decline of the east coast, labor also migrated to the Pacific coast.²

During the war banana cultivation gave way to abaca, balsa, and rubber. United States demands for these strategic war materials averted an economic collapse in Limon. Large sums were spent on the abaca plantations and as a result the former banana growers turned gradually to other occupations.³ Late in 1944 Limon resumed its banana exports chiefly to Florida ports. Latest available data⁴ show that banana shipments from Costa Rica during July, 1947 amounted to 646,884 stems, an increase of 42 per cent over June, 1947 and increases of 5 and 306 per cent over total exports for July, 1946 and

¹United States Department of Commerce. Industrial Reference Service; February, 1946, "Bananas," p. 5.

²Ibid., p. 5.

³Ibid., p. 5.

⁴From copy of Consular Report Number 94, American Embassy; San Jose, Costa Rica, November 7, 1947.



TABLE X. BANANA EXPORTS FROM PRINCIPAL PRODUCING
COUNTRIES IN CENTRAL AMERICA, 1924-46^a
(Thousands)

Year	Costa Rica (bunches)	Nica- ragua (bunches)	Guate- mala (bunches)	Hon- ¹ duras (bunches)	Panama kilograms 1924-25 (bunches) 1926-44	British Honduras (bunches)
1924	8,087	2,845	5,548	9,508	107,336	266
1925	8,349	3,027	5,350	14,604	464,869	270
1926	8,561	2,163	5,561	16,292	3,670	161
1927	7,869	2,386	6,022	17,090	4,392	113
1928	7,323	3,144	6,193	24,318	3,869	149
1929	6,112	4,092	6,425	26,856	4,678	142
1930	5,834	3,861	4,874	29,084	3,541	90
1931	5,080	2,973	5,798	28,961	2,114	87
1932	4,313	3,378	5,248	27,896	1,467	79
1933	4,293	3,698	5,558	27,494	4,045	142
1934	3,210	2,686	5,244	19,463	4,781	293
1935	2,909	3,002	5,595	15,828	5,711	356
1936	3,888	1,932	7,541	12,229	5,825	696
1937	5,510	2,472	8,604	12,710	5,838	939
1938	5,033	1,950	9,389	8,459	6,400	776
1939	3,430	1,653	10,053	12,537	5,414	523
1940	3,295	1,156	8,209	12,678	5,865	437
1941	5,217	731	7,152	13,437	5,669	337
1942	2,517	83	4,640	11,662	2,374	97
1943	2,706		2,664	3,760	945	42
1944	2,181	11	4,495	9,155	1,160	195
1945	2,838	121	7,773	13,138	2,530	146
1946	5,692	313	10,343	14,183	(2)	85

¹Years ending July 31.

²Not available

^aUnited States Department of Commerce. Industrial Reference Service; August, 1947, "Bananas," p. 5.

1945 respectively. The return of Limon as a banana producing division to some degree is shown by its exports for July, 1947 of 107,613 stems, which increased by 82 and 194 per cent as compared to shipments made during July, 1946 and 1945 respectively.



In 1941 the United Fruit Company owned 18,472 acres of land on the Pacific coast of Costa Rica, however, not all was under cultivation. Independent planters had 7,500 acres under cultivation in contrast to the Caribbean coast where independents farmed 7,800 acres. By July, 1944, 8,700 acres were under cultivation on the west coast of Costa Rica with more than 25,000 acres held in reserve subject to banana cultivation.¹

During the war the United Fruit Company in its contracts with private Costa Rican planters, accepted all bananas and paid for them in fulfillment of their agreement and returned the bananas to the producers in an attempt to give them some revenue and save them from ruin.² Banana shipments from Costa Rica in 1946 were double shipments in 1945 (see Table X page 77) and there is every indication that shipments will continue to rise.

Most of Costa Rica's banana yield is exported with only about 2 per cent retained for home consumption. In 1946 the United Fruit Company handled 86.2 per cent in volume of the country's export trade in bananas, and since exports must be 97 or 98 per cent of total commercial production this percentage gives a good indication of the United Fruit Company's relative share of the whole industry.³ In 1946 bananas increased in

¹United States Department of Commerce. Industrial Reference Service; February, 1946, "Bananas," p. 5.

²Ibid., p. 5.

³United States Department of Commerce. International Reference Service; December, 1947, "Economic Review of Costa Rica, 1946," p. 4.



value to 31 per cent of the total exports from 18.3 per cent in 1945. While coffee continued to hold its place as the number one export, 1946 exports dropped to 44.9 per cent of total export value from 66.2 per cent in 1945.¹

While Costa Rica's exports are composed largely of coffee, bananas, lumber, and cacao; imports consist mainly of manufactured items such as shown in Table XI.

TABLE XI. COSTA RICA: IMPORTS AND EXPORTS OF PRINCIPAL COMMODITIES, BY VALUE, 1945^a

(Thousands of dollars)

<u>Commodities imported:</u>	<u>Value</u>
Textiles and clothing	3,187
Foodstuffs	5,616
Chemicals and pharmaceuticals	1,739
Agricultural machinery	416
Petroleum products	1,343
Industrial machinery	472
Iron and steel products	593
Other	13,583
Total	26,949
<u>Commodities exported:</u>	
Coffee	7,489
Bananas	2,233
Cacao beans	261
Tuna fish	113
Lumber	210
Fresh fruits and vegetables, except bananas	182
Rubber	198
Abaca	274
Other	652
Total	11,612

^aU. S. Department of Commerce. International Reference Service; May, 1947, "Costa Rica - Summary of Current Economic Information," p. 3.

¹United States Department of Commerce. International Reference Service; December, 1947, "Economic Review of Costa Rica, 1946," p. 3.



Before the recent war, export duties constituted an important source of revenue; between 1929-1978 they accounted for approximately 11 per cent of the total. In 1979, coffee and bananas, the most important items subject to export duties, accounted for about 72 per cent of the total export value. In 1930, the Costa Rican Government in a contract with the United Fruit Company, fixed the export duty at 2 cents per stem for a 20 year period. In a new agreement in 1978, the Costa Rican Government agreed not to reduce the rate before 1988 as the duty was to apply against a loan granted to Costa Rica by the United Fruit Company.¹ Recently it has been the Costa Rican Government's policy to exempt various products from the payment of export duties in order to stimulate domestic industry.

In 1942 less than 1 per cent of all Costa Rica's revenue came from export duties and most of this was the tax on banana shipments.²

Guatemala

The Republic of Guatemala is the most northerly of the countries comprising Central America. It lies just south of Mexico, bounded on the south by El Salvador and the Pacific Ocean, and on the east by Honduras, British Honduras and the Caribbean Sea. The country has an area of 42,364 square miles (see Table I page 60) and is roughly equivalent to that of

¹United States Tariff Commission. "Economic Controls and Commercial Policy in Costa Rica," p. 7.

²Ibid., p. 13.



the State of Tennessee.¹ A healthful, fertile plateau with an elevation of 4,000 to 11,500 feet forms the interior section of the country. Small plateaus and valleys extend in various directions from the central range, but chiefly toward the Caribbean, where they descend gradually to sea level. The northern part of Guatemala which lies between Mexico and British Honduras is for the most part a low, rolling plain. On the western side, the land is rolling and suited for cattle raising, in the east the area is heavily forested.²

In Guatemala, as in other mountainous tropical areas, the climate varies with the altitude. The coastal regions are hot and damp the entire year. In the central plateau and others adjacent to it, where most of the population lives, the altitude ranges from 3,000 to 8,000 feet. Here the days are hot but the nights are cool. The annual rainfall varies in different vicinities of the country. Near Guatemala City, the rainfall averages 45 inches annually, while in other parts, particularly the coastal regions, it is as high as 200 inches.³

Guatemala's population of 3,451,000 (see Table I page 60) is larger than that of any other Central American country. Its inhabitants have concentrated principally on the interior

¹United States Tariff Commission. "Economic Controls and Commercial Policy in Guatemala, 1947," p. 1.

²Ibid., p. 1.

³Ibid., p. 1.



plateaus and highlands and on the narrow Pacific slope of the mountain range which traverses the country from north to south. The population is predominantly rural; it is estimated that 90 per cent of the population is engaged in agricultural activities.¹ Only three cities have more than 15,000 population and the eight largest cities together constitute less than 10 per cent of the country's population. Guatemala City, the capital and largest city with a population in 1940 of 164,000,² is located in the central plateau region.

The Guatemalan people do not enjoy a high standard of living nor do they have much initiative.³ The country consists chiefly of descendants of the Mayan Indian tribes. One official estimate points out that approximately two-thirds of the population is of pure Indian blood, others run as high as 80 per cent. The Indians grow and produce everything which they require, and a great number of them are employed on the banana and coffee plantations.⁴ The official language is Spanish, however, Indian dialects are widely used, and English is also spoken to some extent.

At the close of 1946, it was estimated that Guatemala had 4,393 miles of all-weather roads (see Table III page 61).

¹United States Department of Commerce. Bureau of Foreign and Domestic Commerce. "Commercial Travelers' Guide to Latin America," Washington, D. C., 1941, p. 73.

²United States Tariff Commission. "Economic Controls and Commercial Policy in Guatemala," p. 2.

³Jones, Chester Lloyd. "The Caribbean Since 1900," p. 447.

⁴United States Department of Commerce. Bureau of Foreign and Domestic Commerce. "Commercial Travelers' Guide to Latin America," p. 73.



The Pan American Highway through Guatemala has been completed and is passable throughout the year though not completely surfaced. Of Guatemala's total railroad mileage of 483 miles (see Table III page 61), the banana industry accounts for 210 miles of railroads and 83 miles of tramways, all of which are owned by the United Fruit Company.¹

There are four airlines serving Guatemala (see Table III page 61). The United Fruit Company operates a service which connects its two divisions of Bananera and Tiquisate. Several of the local lines also operate to these banana areas.

Guatemala has three major ports: Puerto Barrios on the Caribbean, San Jose, and Champerico on the Pacific. Since Guatemala's banana divisions are located in the interior, long rail hauls are necessary to the principal banana loading port of Puerto Barrios. The United Fruit Company has not found it necessary to build a railroad of its own in order to transport its fruit to Puerto Barrios. United Fruit's branch lines connect with the main line of the International Railways of Central America. This Line has a contract with the United Fruit Company for carrying all of the latter's products over the area served by the Line. It has depended upon the United Fruit Company for a large part of its revenue; for example, in 1929 the International Railways of Central America received \$932,558 for the transporting of bananas, as against a total

¹United Fruit Company. "Forty-Seventh Annual Report to the Stockholders of the United Fruit Company for the Fiscal Year 1946," p. 18.



of \$1,085,824 for coffee and all other exports.¹

The economy of Guatemala is distinguished chiefly by its dependence on coffee and bananas; coffee being the more important of the two, usually accounting for approximately three-fifths of the country's exports.² The production of bananas increased considerably during the decade before the outbreak of World War II. Prior to 1936 the banana industry was centered chiefly on the Caribbean side; however, the damage caused to the large plantations by sigatoka and Panama disease caused the industry to turn to the Pacific coast where it made extensive plantings. In 1938 Guatemala ranked fourth among countries exporting bananas surpassed only by Jamaica, Mexico, and Honduras.³

The cattle industry is important and is encouraged by the Government. While minerals are known to exist in the country, there has been little or no important commercial development.

Only the simpler types of manufacturing have been developed. Most raw materials and practically all machinery must be imported. The textile industry is Guatemala's leading manufacturing industry.⁴

There are two principal banana producing areas in Guatemala; one is located at Bananera, near the Caribbean coast, the

¹Kepner and Soothill. *op. cit.*, p. 157-159.

²United States Tariff Commission. "Economic Controls and Commercial Policy in Guatemala," p. 2.

³*Ibid.*, p. 3.

⁴*Ibid.*, p. 3.



other at Tiquisate, near the Pacific coast. Livingston, also a Caribbean port, was of some importance in the early years of the banana industry, as well as were small plantings along the Guatemalan and Mexican border. Shipments were made from Pacific ports or through Mexico.¹

Two factors encouraged the production of bananas in Guatemala as early as 1885. A steamship line which had been established between New Orleans and Livingston coupled with the bounty offered by the Guatemalan Government, helped to establish the industry. In 1906 the United Fruit Company undertook extensive operations in Guatemala almost at the same time that construction was started on the International Railways system.²

In 1909 exports were 765,223 stems; by 1917 over 2,000,000 stems were shipped exclusively to United States ports. Exports increased steadily through 1929 when more than 6,000,000 stems were exported (refer to Table X page 77). Exports dropped to 4,000,000 stems in 1930 caused by a decline in demand and lack of adequate port facilities. Honduras, Guatemala's neighboring republic, was a strong competitor having a larger supply and better port facilities enabling shipments to be dispatched to United States markets at a faster pace than Guatemalan facilities afforded.³

¹United States Department of Commerce. Industrial Reference Service; February, 1946, "Bananas," p. 6.

²Ibid., p. 6.

³Ibid., p. 6.



The most important developments in Guatemala's export trade between 1929 and 1938 were the increase in banana exports, the decline of coffee, the increasing share of exports taken by the United States and the decline of Germany as a market. The share of total exports accounted for by bananas increased from 13 per cent of the total declared value in 1929 to 32 per cent in 1939, while coffee declined from 76 per cent to 56 per cent during the same period.¹

Exports increased from 1936 to the outbreak of World War II. As a result of restricted shipping during the war, large plantations were cut back, acre after acre being chopped down. Banana growers were more visibly affected by the war than any other group of agriculturists in Guatemala.²

Prior to the late war in addition to its United States markets, Guatemala served several European markets among which were England, Germany, and the Netherlands. During the war these European markets disappeared; however Guatemala is hopeful of an early return to these foreign markets.

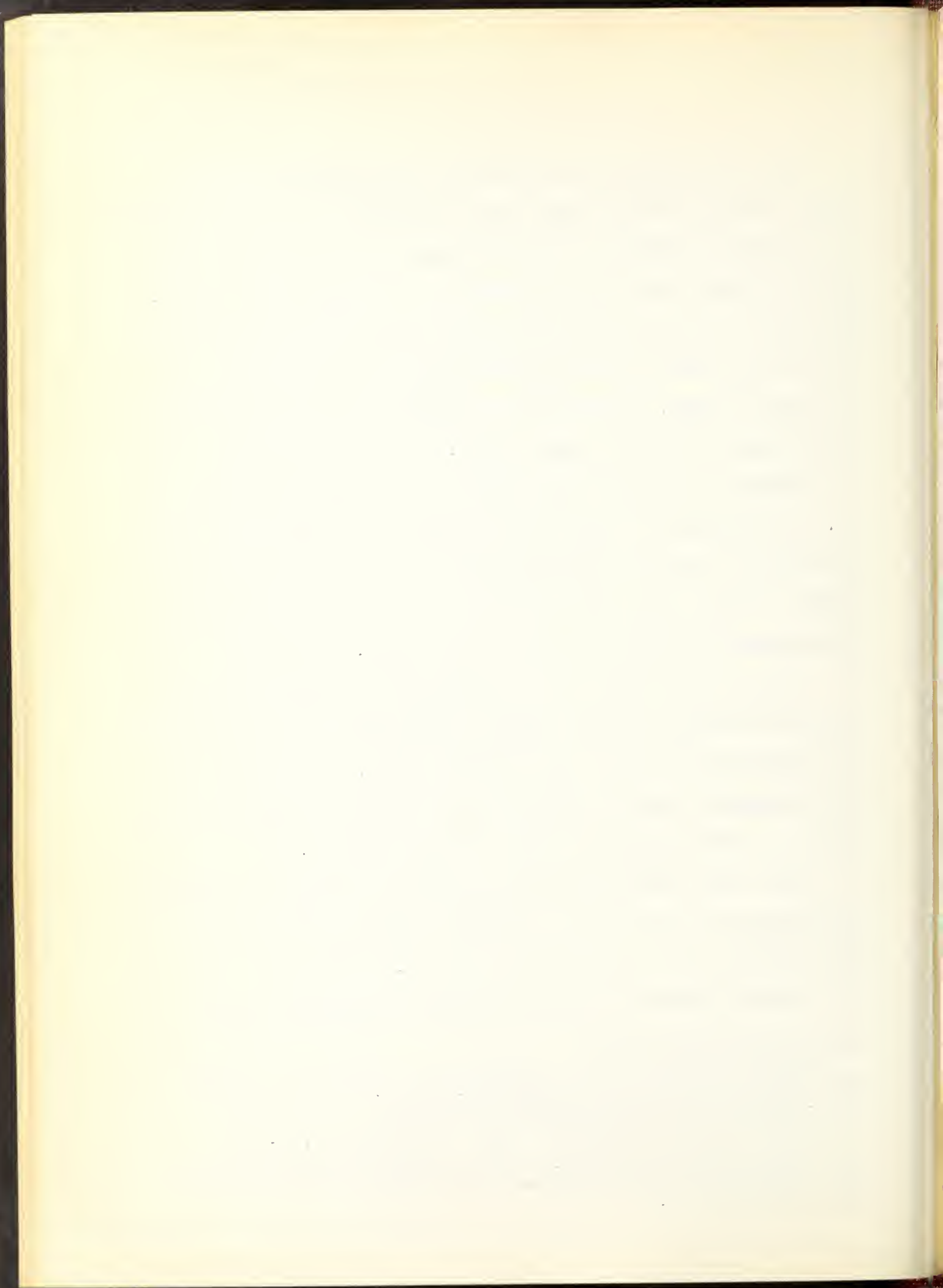
More than 33,300 acres were under cultivation in 1946 by the United Fruit Company, in addition other land is held by this company for future banana planting.³

Banana exports in 1946 amounted to 10,649,313 stems

¹United States Tariff Commission. "Economic Controls and Commercial Policy in Guatemala," p. 4.

²United States Department of Commerce. Industrial Reference Service; February, 1946, "Bananas," p. 6.

³United Fruit Company. "Forty-Seventh Annual Report to the Stockholders of the United Fruit Company for the Fiscal Year 1946," p. 17.



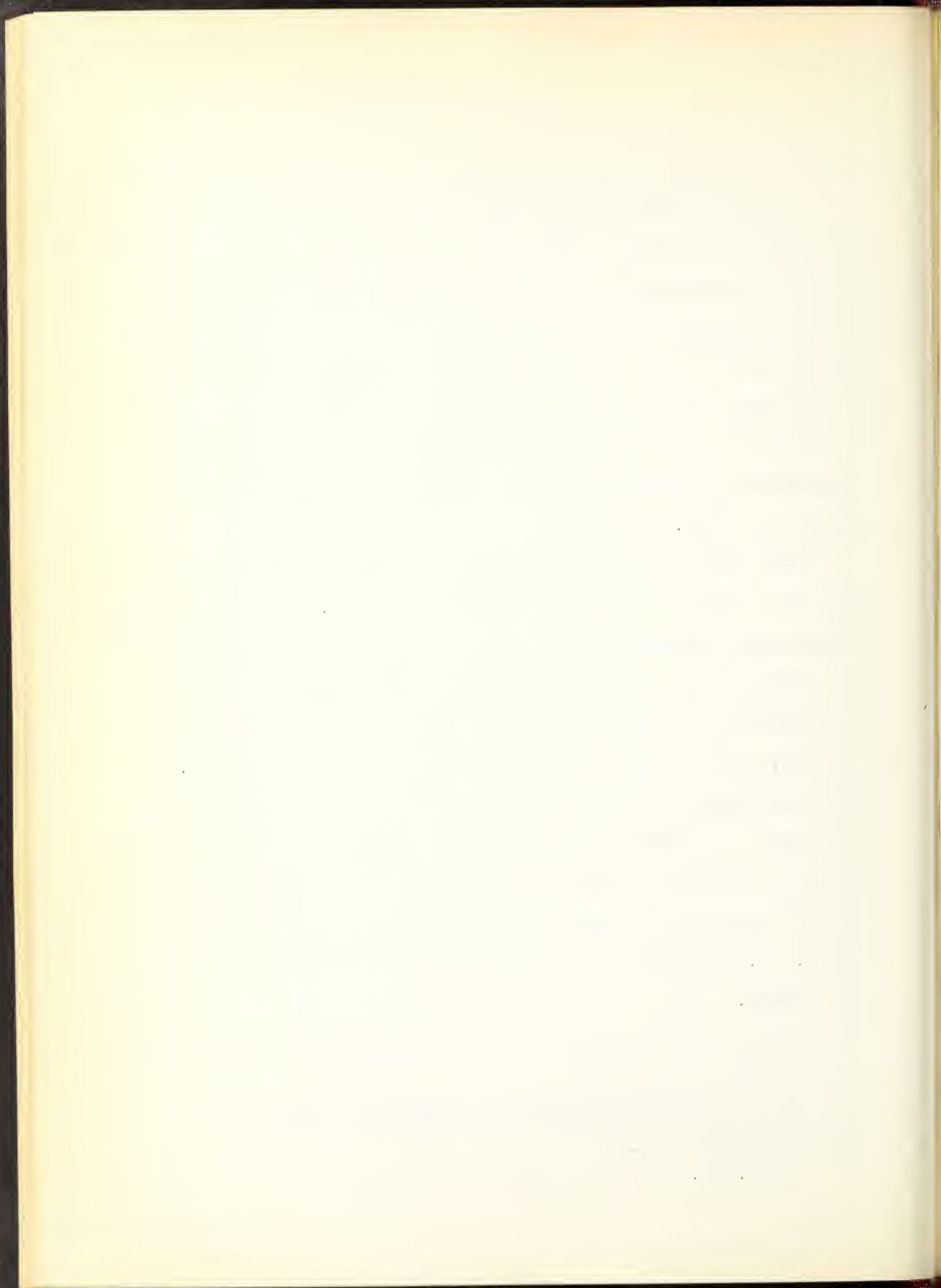
weighing 243,952 tons and declared at a value of \$8,687,588. The volume of shipments by weight increased 14 per cent over 1945 and total values increased by 47 per cent. Banana exports during 1946 reached an all-time high due chiefly to heavy buying by independents. Heavy demand in United States markets enabled these buyers to accept and ship small-sized bananas of inferior quality, produced principally from plants grown as shade for coffee trees. Practically all kinds of bananas, regardless of weight, quality, or degree of ripeness, were shipped in 1946.¹

The average declared value for all 1946 exports was at the rate of \$0.815 per stem or \$35.61 per ton. By way of contrast, the average declared value of United Fruit's shipments in 1946 was \$0.64 per stem or \$29.80 per ton, while values declared by independents averaged \$0.68 per stem or \$67.89 per ton. All bananas shipped averaged 46 pounds per stem.² The profitableness of the banana industry can be determined by comparing the retail market prices of bananas in United States markets of \$0.14 to \$0.18 per pound with the average declared value of \$0.017 per pound (average declared value per stem, as above, \$0.815, divided by average weight per stem, as above, 46 pounds).

Seventy-five per cent of all banana exports in 1946 were

¹United States Department of Commerce. International Reference Service; January, 1948, "Economic Review of Guatemala in 1946," p. 5.

²Ibid., p. 5.



produced on the Pacific slope, the remainder on the Caribbean side. Although the principal production area is near Pacific ports, more than 99 per cent of all shipments were made from the Caribbean port of Puerto Barrios.¹ Port facilities on the Pacific coast are inadequate as loading is handled by barges which present numerous difficulties in the handling of perishable fruits.

Latest available data² show that during the month of July, 1947 a total of 1,267,564 stems of bananas were exported from Guatemala (see Table XII).

TABLE XII. BANANA EXPORTS - GUATEMALA, JULY, 1947

Shipper	No. of stems	Weight in Pounds	Declared Value
United Fruit	217,049	14,108,185	\$ 138,911.76
Cia Agricola	688,610	44,759,650	440,710.40
Frutera Inter.	174,294	7,305,690	218,106.53
Frco. Miralles	91,824	3,749,250	112,313.92
Pedro Montane	43,671	1,681,690	55,840.93
Bananera del Pacifico	17,079	721,408	24,702.66
Philip Kneisley	13,676	630,678	28,380.51
Mario Suarez C.	8,092	323,050	10,017.05
Luis Terraza	8,134	340,690	10,561.79
William Sutley	5,135	205,800	9,261.00
Total	1,267,564	73,826,191	\$1,048,805.75

(The first two shippers referred to in Table XII, United Fruit and Cia. Agricola, represent United Fruit Company interests while the others represent independent planters.)

¹United States Department of Commerce. International Reference Service; January, 1948, "Economic Review of Guatemala in 1946," p. 5.

²From copy of Consular Report Number 292, American Embassy; Guatemala City, Guatemala, September 11, 1947.



All bananas exported from Guatemala during July, 1947 were produced on the Pacific slope with the exception of 217,049 stems produced by the United Fruit Company at Bananera.¹

Destinations were as follows:²

United Fruit Company	}	New Orleans, Mobile, Baltimore,
Compania Agricola		Charleston, and Canada
Frutera Internacional		Brownsville, New Orleans, Miami, and Tampa
Francisco G. Miralles		Tampa and Jacksonville
Pedro Montane		Miami
Bananera del Pacifico		Los Angeles and Miami
Philip Kneisley		Los Angeles Harbor
Mario Suarez Conde		Miami
Luis Terrazas		Miami
William Sutley		Los Angeles Harbor

Comparisons of shipments by the United Fruit Company with independent planters for months of July during 1947 to 1947 are as follows:³

Year	By United Fruit Company and Subsidiary	By Independents	Total
1943	112,825	-	112,825
1944	382,614	-	382,614
1945	817,343	69,037	886,380
1946	488,727	322,270	810,997
1947	905,659	361,905	1,267,564

Available data indicate that farm wages throughout most of the country in 1946 were approximately double those of 1944 with half of this increase occurring in 1946. However, there are still areas where wages are as low as 5 cents a day (not including food rations). Indians in various regions were averaging 15 cents a day while wages in the highland farming

¹From copy of Consular Report Number 292, American Embassy, Guatemala City, Guatemala, September 11, 1947.

²Ibid.

³Ibid.

area were approximately 20 to 25 cents a day.¹ Wages on privately owned coffee plantations averaged 30 to 40 cents; on the larger privately owned farms, wages and housing were somewhat better with medical and hospitalization provided. On practically all farms, wage-earners' food rations amounted to about 10 cents a day. The best paid farm workers were those employed by the United Fruit Company at Tiquisate (Pacific coast) where the minimum wage was 80 cents a day and at Bananera (Caribbean coast) where the minimum wage was \$1.00 per day. Average daily wages at Tiquisate and Bananera were \$1.20 and \$1.40 respectively.²

Guatemala depends heavily on its revenue from export duties. Although most items in the export tariff are duty-free, taxes are levied on the chief export products, coffee, bananas, chicle, sugar, hides, skins, and cerba logs. Duty on coffee has been quite heavy with the result that coffee growers have protested vigorously. Bananas, Guatemala's second most important export product, have been taxed since 1917. However, to encourage production and exportation, the Guatemalan Government reduced the duty in 1924 from 2 cents to 1 cent per stem with the provision that an additional 1 cent would be levied on exports of bananas grown on the Pacific slope.³

¹United States Department of Commerce. International Reference Service; "Economic Review of Guatemala in 1946," January, 1948, p. 8.

²Ibid., p. 8.

³United States Tariff Commission. "Economic Controls and Commercial Policy in Guatemala," p. 7.



The United Fruit Company produces over half of all bananas exported from Guatemala. In addition to its own cultivations, the company has entered into contracts with hundreds of private planters whereby the land owner plants and cultivates the crop, while the company installs, maintains and operates a spraying system for the control of sigatoka and Panama disease.¹

Guatemala has had several blowdowns in recent years, and it is believed that because of these losses, acreage increases on the Pacific slope will not materialize to any great extent. The importance of the Caribbean area will decline due chiefly to Panama and sigatoka disease prevalent in that area.²

Honduras

Honduras is the third largest of the Central American countries being bounded on the north by the Caribbean Sea, on the west by Guatemala, and on the south by El Salvador and Nicaragua. It has an area of 59,160 square miles (see Table I page 60) being about the size of the State of Florida. Its northern coastline extends for about 350 miles on the Caribbean Sea, and its Pacific coastline extends for about 50 miles.³

The topography of the country is somewhat diversified. It is mountainous and heavily forested with elevations ranging

¹United States Department of Commerce. Industrial Reference Service, August, 1947, "Bananas," p. 3.

²Ibid., p. 3.

³United States Department of Commerce. Bureau of Foreign and Domestic Commerce. "Commercial Travelers' Guide to Latin America," Washington, D. C., 1941, p. 88.



up to 10,000 feet. Spurs extending from these ranges form a number of elevated plateaus, fertile valleys, and plains. Along the Caribbean coast and to a lesser extent on the Pacific coast, are extensive areas of flat alluvial lands where the vast banana plantations of Honduras are located. The climate is much the same as in Guatemala and in Costa Rica. The rainfall is quite heavy along the coastal plains.

The population is predominantly rural; however, there are still large sections of the country that are virtually unoccupied. The eight principal cities with their surrounding rural areas, constitute approximately 10 per cent of the total population.¹ Tegucigalpa, the capital city, has a population of approximately 55,715.² The people of Honduras constitute a mixture of European and Indian stock known as Mestizos. The native tongue is Spanish, however, some of the Indian tribes speak only their own dialects, while in the vicinity of the banana companies, English is used to a considerable extent. All of the Negroes on the Caribbean and north coasts of Honduras are employed by the banana industry.³

Tegucigalpa is the commercial center for both the gold and silver mining regions and the agricultural region in the interior and the south coast area. The city has no outside

¹United States Tariff Commission. "Economic Controls and Commercial Policy in Honduras," Washington, D. C., 1947, p. 1.

²United States Department of Commerce. International Reference Service; Volume 4, Number 44, September, 1947, "Living and Office Operating Cost in Honduras," p. 1.

³United States Tariff Commission. "Economic Controls and Commercial Policy in Honduras," p. 2.

rail connections, depending on its all-weather roads which are very good.¹ The lack of rail and highway facilities in some areas is compensated for by the extensive network of airlines which cover Honduras.²

In Honduras the United Fruit Company owns 337 miles of railroads and operates an additional 13 miles. It also owns 13 miles of tramways all of which are maintained for banana cultivation purposes.³ The Standard Fruit and Steamship Company also operates an extensive network of railroads in Honduras.⁴ Practically all of the total rail mileage in Honduras is located on the north coast, being owned or operated by the fruit companies.

Honduras has four major ports, three of which, Puerto Cortes, La Ceiba, and Tela, are operated by the banana companies.

At present United States coins make up a large part of the circulating currency in Honduras,⁵ the practice having originated in the early days of the banana trade when payrolls were paid in United States coins.

Although Honduras is essentially an agricultural country,

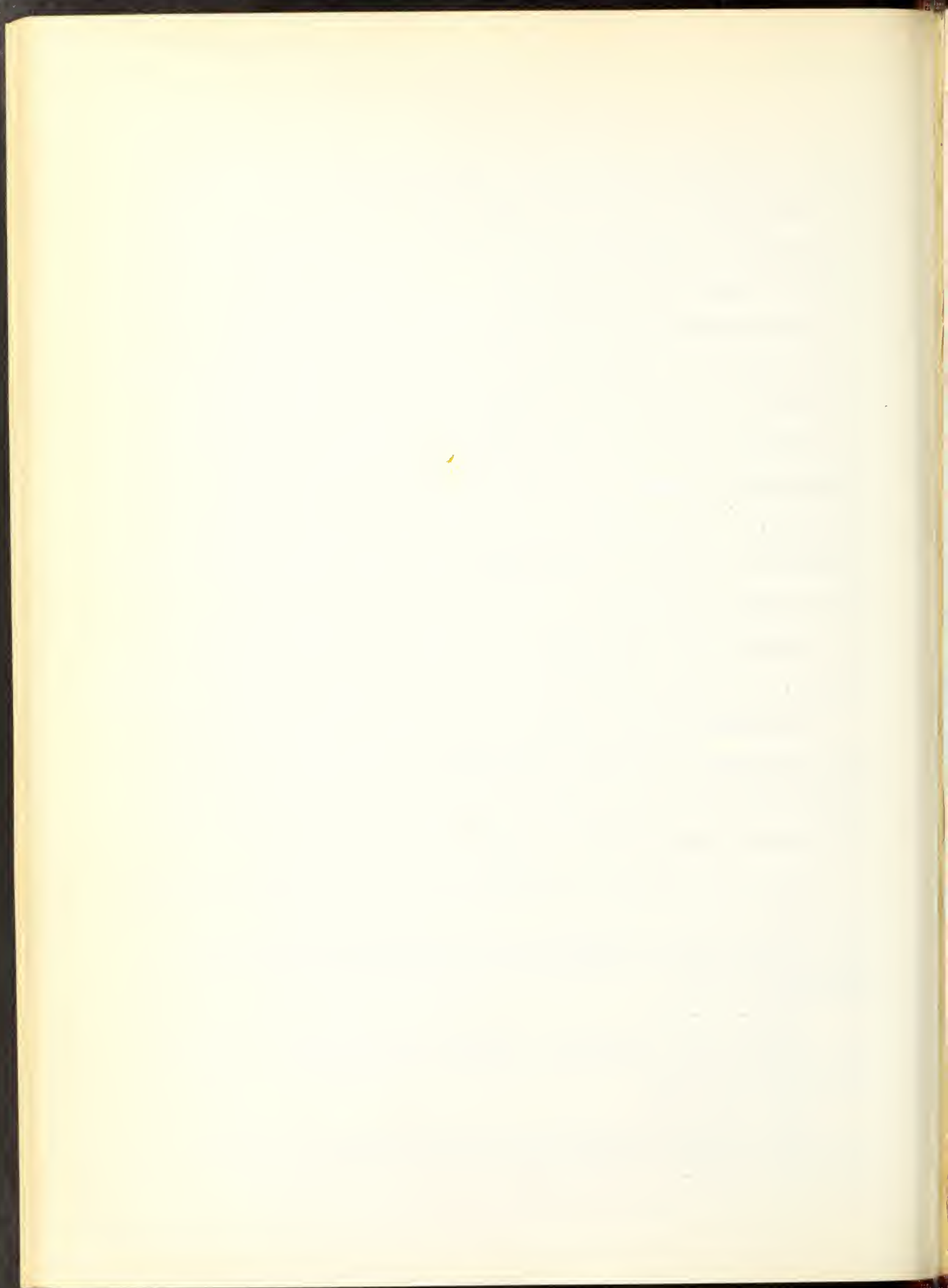
¹United States Department of Commerce. International Reference Service, "Living and Office Operating Cost in Honduras," p. 4.

²Ibid., p. 4.

³United Fruit Company. "Forty-Seventh Annual Report to the Stockholders of the United Fruit Company for the Fiscal Year 1946," p. 18.

⁴See page 29.

⁵United States Department of Commerce. International Reference Service, "Living and Office Operating Cost in Honduras," p. 1.



only a small proportion of its total area is cultivated. Bananas, coffee, gold, and silver are the principal exports, however, Honduran export trade depends chiefly on bananas.¹ There has been practically no industrial development of importance.²

Honduras exported its first bananas on a commercial basis about 1890, approximately the same time that other countries in Central American began to export. In 1911 its exports totaled more than 6,000,000 stems.³

With the entrance of the United Fruit Company and the Standard Fruit and Steamship Company into Honduras and the development of new lands, construction of railroads, and the construction of ports, the banana industry progressed rapidly. Honduras stands alone as the greatest producer of bananas in the world.⁴ The whole structure of the Honduran export trade centers largely around one commodity - bananas; in a normal year Honduras is able to produce 30,000,000 stems principally in the consular districts of Puerto Cortes and La Ceiba in the northern section of the Republic. All commercial industry is controlled by the United Fruit Company and the Standard Fruit and Steamship Company; the two companies also furnish approxi-

¹United States Tariff Commission. "Economic Controls and Commercial Policy in Honduras," p. 2.

²Ibid., p. 3.

³United States Department of Commerce. Industrial Reference Service, "Bananas," February, 1946, p. 6.

⁴Ibid., p. 6.



mately 25 per cent of the government's income.¹

The outstanding features in the Honduran export trade between 1929-38 were the declining share of bananas in total exports, the rising share of precious metals, and the increasing importance of the United States as a market. Between 1929 and 1938, bananas declined from 85 to 59 per cent of the total value of exports, while metals increased from 6 to 26 per cent. In the years 1936-38, banana exports averaged 12,000,000 stems annually, 90 per cent of which went to the United States.

Coffee, the second-ranking agricultural export is comparatively unimportant accounting for only about 3 per cent of the total value of exports in the same period.²

In 1944 banana exports totaled 9,172,906 stems as compared to 3,880,133 stems in 1943 when shipping facilities were inadequate. During the late war, the Honduran banana industry narrowly escaped ruin by shipping shortages. However, both banana companies maintained their divisions in good order and were able to resume normal operations when shipping became available.

The dehydrated banana industry, the Sanib Corporation of Puerto Cortes, Honduras, which utilizes rejected fruit, has practically ceased operations. During the war when fruit was spoiling for lack of shipping space, hundreds of thousands of

¹United States Department of Commerce. Industrial Reference Service, "Bananas," February, 1946, p. 6.

²United States Tariff Commission. "Economic Controls and Commercial Policy in Honduras," p. 2-3.



pounds of dried and powdered bananas were exported. As shipping became available, there appeared to be little hope for the continued existence of this industry.¹

Banana exports in 1946 amounted to 14,163,557 stems, an increase of 8 per cent over 1945 shipments. United States markets received 85 per cent of the total bananas exported, most of the remainder going to Canada. Approximately 90,000 stems were diverted to Sweden and the Netherlands during the Maritime shipping strike in the United States ports. The United Fruit Company and the Standard Fruit and Steamship Company together produced 94 per cent of the total bananas exported, the remaining 6 per cent contributed to production by independent growers all of which was purchased by the two companies.²

The value of banana production and its importance in the economy of Honduras are reflected by the operations of the two banana companies, their expenditures for labor and other items. During 1946 the average employment of the two companies approximated 30,000 workers with aggregate payrolls amounting to \$13 million, compared to 26,000 workers and payrolls of \$11 million in 1945.³

Latest available data⁴ show that banana production in

¹United States Department of Commerce. Industrial Reference Service, "Bananas," February, 1946, p. 6.

²United States Department of Commerce. International Reference Service, "Economic Review of Honduras, 1946," November, 1947, p. 6.

³Ibid., p. 6.

⁴From copy of Consular Report Number 247, American Embassy; Tegucigalpa, Honduras, September 19, 1947, p. 1.



Honduras during the second quarter of 1947, as during the first quarter, was higher than that for the same period of 1946. Table XIII, page 98, shows the number of stems and declared export value in dollars of bananas shipped from Honduras during the second quarter of 1946 and 1947.

The American Embassy, Tegucigalpa, Honduras reports:¹

"Of the total number of stems shipped during the quarter, 274,590, almost 5%, were grown by independent producers and purchased by the large companies for a total of \$120,602.63. While the number of stems was 2% below the 279,919 purchased last year, payments for the same were 18% above the \$102,176.90 paid last year.

"The total acreage under commercial cultivation in bananas at the end of June, 1947 was somewhat higher than that of a year earlier or at the beginning of the quarter under review. The following table shows commercial banana acreage as of the dates mentioned:

Number of Acres Cultivated in Bananas

	<u>June 30, 1946</u>	<u>March 31, 1947</u>	<u>June 30, 1947</u>
Tela Railroad Company ^a	35,742	36,348	36,675
Independents in the Tela R. R. Company area	2,842	2,683	2,676
Standard Fruit and Steam- ship Company	<u>9,576</u>	<u>10,648</u>	<u>10,380</u>
Total Acreage	48,120	49,679	49,691

^a(United Fruit Company subsidiary)

"In addition to the bananas noted above, 39,894 stems of plantains were shipped by the Tela Railroad Company during the quarter.

"The labor situation and general economic conditions in the North Coast area of Honduras, which to a large degree reflect conditions in the banana industry, continued very favorable during the period under review. The number of employees on fruit company pay-rolls as of the end of June, 1947 and the amount of

¹From copy of Consular Report Number 247, American Embassy; Tegucigalpa, Honduras, September 19, 1947, p. 2.

TABLE XIII. PRODUCTION AND EXPORTATION ^a

Month	Quarter Ended June 30, 1946		Quarter Ended June 30, 1947	
	No. of Stems	Declared Value	No. of Stems	Declared Value
April	1,031,848	\$ 632,533.70	1,436,246	\$ 893,700.85
May	1,513,946	923,233.75	1,798,523	1,114,201.45
June	1,541,429	957,533.65	1,794,474	1,114,597.50
Total	4,087,223	\$2,513,301.10	5,029,243	\$3,122,499.80
<u>Destination</u>				
United States	3,428,225	\$2,084,951.10	4,700,059	\$2,908,530.20
Canada	659,000	428,350.00	219,560	142,714.00
Europe	--	--	109,624	71,255.60
Total	4,087,223	\$2,513,301.10	5,029,243	\$3,122,499.80
<u>Port of Shipment</u>				
Puerto Cortes	1,760,230	\$1,144,149.50	2,605,032	\$1,693,270.80
Tela	1,371,034	891,172.10	1,447,490	940,868.50
La Ceiba	955,959	477,979.50	976,721	488,360.50
Total	4,087,223	\$2,513,301.10	5,029,243	\$3,122,499.80

^a(From copy of Consular Report Number 247, American Embassy, Tegucigalpa, Honduras, September 19, 1947, p. 1.)

payrolls during the quarter, were as follows:

	Number of Workers	Payrolls
Tela Railroad Company	27,664	\$3,036,516.37
Standard Fruit Company	10,739	1,036,951.87
Total	34,403	\$4,073,468.24

"The number of workers employed at the end of June, 1947 was 9% higher than the 31,587 employed in June, 1946 and 5% above the 32,640 employed at the end of March, 1947. Payrolls during the second quarter of 1947 were 27% above the \$3,324,527.03 of the corresponding quarter of 1946 and 22% above the \$3,332,346.21 paid during the first quarter of 1947.

"Due to the increased payrolls, the total expenditures of the two fruit companies in Honduras (the chief source of the country's dollar exchange) were the highest of any recent quarter; aggregate local expenditures totaled \$5,538,210.43 in the quarter ended June 30, 1947 24% above the \$4,469,037.10 spent locally during the corresponding period of 1946 and 13% higher than first quarter 1947 expenditures of \$4,915,359.35. The breakdown of local expenditures in the quarter under review may be seen from the following table: (in U. S. dollars)

	Tela Railroad Co.	Standard Fruit Co.	Total
Payrolls	3,036,516.37	1,036,951.87	4,073,468.24
Local Purchases	614,335.51	507,072.17	1,121,407.68
Fruit from			
Independents	110,378.83	10,223.80	120,602.63
Taxes to:			
National Government	107,582.47	50,686.81	158,269.28
Local Government	33,553.73	11,308.87	44,862.60
Freight on National			
Railroad	19,600.00	---	19,600.00
Total	3,921,966.91	1,616,247.52	5,538,210.43

"While a seasonal decline in production may be expected in the latter part of the year, the situation of the industry is expected to remain very good."

Because of the predominant position of the banana in the economy of Honduras, the effects of fluctuations in prices of

bananas, shifts in markets, and variations in the volume of production are directly reflected in both the export and the import trade of the country. Also, since the larger part of the country's revenue is derived from import and export duties, any diminution in foreign trade adversely affects the fiscal position of the country.¹

Government intervention in the economic life of the country has been less pronounced in Honduras than in many other Latin American Republics. Because of its small population and the character of its economy, the controls exercised have been important to the productive and commercial activity of the country. Import duties are the principal source of revenue while export duties, even though levied solely for revenue, account for a negligible part of government income.² Export duties are levied on bananas, female cattle, and a wide variety of lumber products, all of which amounts to only about 2 per cent of the total revenue. The tax on bananas, which accounts for most of the revenue from export duties, is 2 cents per stem. Exports made by enterprises to which concessions have been granted to encourage production are duty-free.³

As in other countries, the war brought higher prices to Honduras and cost of living at the end of 1945 were triple and

¹Foreign Commerce Weekly. "Honduras Faces its 'Unsold Bananas' Problem," April 3, 1943, p. 6.

²United States Tariff Commission. "Economic Controls and Commercial Policy in Honduras, " p. 4, 10.

³Ibid., p. 10.

in many cases quadruple to those immediately preceding the war. Generally speaking, living costs in the banana regions were lower, especially for fruit company employees, than in other sections of the country.¹ Fruit company commissaries carry food and other goods at far lower prices than elsewhere in the country. Low, nominal charges for hospital and medical care provided for by the fruit companies for their employees also greatly aided the employees of these companies to reduce their cost of living. These facilities are also provided for in other Central American Republics by the fruit companies.

British Honduras

British Honduras is a British Crown Colony, the only country of Central America which is not a Republic. It has an area, including the coast islands, of 8,600 square miles. The country lies to the east of northern Guatemala and south-east of the Mexican Peninsula of Yucatan. The coastal areas, which extend about 180 miles along the Caribbean Sea and the northern area are flat, the southern part being hilly ranging in altitude up to 7,700 feet. Most of the area is covered with dense forests.²

The climate is subtropical, hot days and cool nights. Rainfall is lightest in the north and heaviest in the south. Belize, the capital and largest city with a population of

¹United States Department of Commerce. International Reference Service, "Living and Office Operating Cost in Honduras," September, 1947, p. 2.

²Report of The American Consulate; Belize, British Honduras, April, 1946, p. 1.

22,000, is the principal port and distribution center. Only about 2 per cent of the people are pure white; namely, the English, Scotch, and the American, the remainder being Negro, Maya-Indian, Spanish-American, and Carib-Indian.¹ Since the country is a British Crown Colony, English is the commercial and official language, although Spanish is used. Only about 10 per cent of the total population live moderately well, the remainder, consisting chiefly of unskilled laborers, live a low standard because of their low wages.²

Inland transportation consists of 230 miles of roads while total railroad mileage amounts to only 44 miles (see Table III page 61). Belize has the only major airport in the country, being served by two major international airlines.

Banana cultivation in British Honduras is carried on exclusively by the peasants who cultivate small farms of about 20 acres in size. Insufficient rainfall, inadequate transportation facilities, Panama and sigatoka diseases are contributing factors to low banana production in British Honduras,³ the industry now ranking third as a domestic export item.⁴ The soil in this country does not compare to that of other banana

¹Report of The American Consulate; Belize, British Honduras, April, 1946, p. 1. Refer also, United States Department of Commerce, Bureau of Foreign and Domestic Commerce, "Commercial Travelers' Guide to Latin America, " p. 59.

²Ibid.

³United States Department of Commerce. Industrial Reference Service, "Bananas," February, 1946, p. 6.

⁴United States Department of Commerce. Bureau of Foreign and Domestic Commerce, "Commercial Travelers' Guide to Latin America," p. 60.

producing countries, in addition unscientific methods of cultivation have been a factor in the decline of production in British Honduras.¹

The largest shipment of bananas from British Honduras was made in 1937 when 938,985 stems were exported (see Table X page 77). Since 1937, exports have declined steadily; 1946 shipments totaled 84,798 stems all of which were shipped to the United States.²

Nicaragua

Nicaragua, the largest of the six countries comprising Central America, has an area of about 57,144 square miles being approximately equivalent in area to the State of Michigan (see Table I page 60). It is bounded on the north by Honduras, on the east by the Caribbean Sea, on the south by Costa Rica, and on the west by the Pacific Ocean.³ Like Honduras, its Caribbean coastline is longer than its Pacific coastline. The Caribbean coast extends for about 270 miles and the Pacific coast for about 175 miles.⁴

The western section of Nicaragua is mostly a coastal plain slightly above sea level, and the interior is mountainous.

¹United States Department of Commerce. Industrial Reference Service, "Bananas," August, 1947, p. 3.

²Ibid., p. 3.

³United States Tariff Commission. "Economic Controls and Commercial Policy in Nicaragua," 1947, p. 1.

⁴The Foreign Service of the United States of America. American Embassy; Managua, D. M., Nicaragua. "Summary of Economic Information," 1945-1946, p. 1.

The Caribbean coastal plain which is part swamp, extends inward for approximately 50 miles. The interior of the country is sparsely inhabited being principally timbered plains and rolling hills gradually rising to a rugged mountainous terrain.

The climate of the eastern and western sections of Nicaragua differ. In the east, rains are frequent the entire year while the west experiences distinct wet and dry seasons. The rainfall along the Caribbean coast averages between 150 and 300 inches annually, while the west coast averages from 60 to 65 inches.¹ Unlike the inhabitants of other Central American countries, the greater part of the Nicaraguan people live in the hot, dry western section. Many of the people are of mixed Spanish and Indian blood, however, some are of pure Spanish or Indian blood. Nicaragua's Negro population is centered chiefly on the Caribbean coast where they figure largely in the banana industry. Managua, the capital and largest city with an estimated population of 115,000,² is situated on the southern shore of Lake Managua.

Nicaraguan highways in 1944 were estimated to be 1,000 miles; the country's railroad mileage is small, totaling only 230 miles (see Table III page 61). The principal railroad is the El Ferrocarril de Pacifico de Nicaragua (The Pacific Railroad of Nicaragua) linking Corinto, on the Pacific coast, with Leon, Managua, and the coffee regions.

¹The Foreign Service of the United States of America, American Embassy; Managua, Nicaragua, 1945-1946, p. 1.

²United States Tariff Commission. "Economic Controls and Commercial Policy in Nicaragua," p. 2.



A number of airlines serve Nicaragua connecting all sections of the country.

The country has three major ports which are Corinto, Bluefields, and Puerto Cabezas. The latter two were constructed in the early days of the flourishing banana industry in Nicaragua. Today, Corinto is the more important; in 1947 approximately 13 per cent of the country's total imports passed through the two banana ports of the east coast, the remainder being credited to Corinto (74 per cent) and Managua.¹

The commercial possibilities of Puerto Cabezas are limited in that the functions of the port are almost entirely controlled by the Standard Fruit and Steamship Company.² The port of Bluefields has declined in importance in recent years as some of its business shifted to Puerto Cabezas with the reopening of the Pis-Pis mining district.³ The United Fruit Company, while not actively producing bananas in Nicaragua today, retains an office and a skeleton force in Bluefields looking after the remains of its once great banana division.

From 1905 to about 1940 bananas formed an important agricultural export crop for Nicaragua. Banana exports in 1929 totaled more than 4,000,000 stems with a declared value of

¹The Foreign Service of the United States of America. American Embassy; Managua, Nicaragua, 1945-1946, p. 2.

²United States Department of Commerce. Bureau of Foreign and Domestic Commerce, "Commercial Travelers' Guide to Latin America," p. 105.

³Ibid. p. 105.

\$1,985,000. Since 1937, hurricanes, floods, and banana diseases have steadily decreased the country's production and exports of bananas. Lack of shipping space in 1941 dropped exports to practically nothing and by 1942 not a single stem was shipped. However, in 1944 over 11,000 stems were shipped from the east coast, the western areas using the fruit for food and livestock feed.¹

During the country's best years, the greatest production was centered along the numerous rivers emptying into the Caribbean. It has often been stated that bananas were to the east coast of Nicaragua as coffee was to the west coast of the country.²

Since its start, the industry in Nicaragua has been one of huge investments and heavy losses. Jungle forests were cleared and then abandoned, railroads which had penetrated the jungle areas for hundreds of miles were left to rust. No efforts were made to control sigatoka and Panama disease, and irrigation and scientific fertilization were not practiced to any great extent.³

In 1945, exports commenced again on a very small scale, 120,959 stems being shipped from Caribbean ports. In 1946, exports rose to 313,422 stems.⁴ As of February, 1946 there

¹United States Department of Commerce. Industrial Reference Service, "Bananas," February, 1946, p. 5.

²Ibid., p. 5.

³Ibid., p. 5.

⁴United States Department of Commerce. Industrial Reference Service, "Bananas," August, 1947, p. 3.

were 17,514 acres under cultivation, all of which were small farms ranging in size from 25 to 125 acres.¹

A United States company has been conducting extensive soil tests and irrigation experiments near the Escondido and Rio Grande rivers on the Pacific coast with the idea of starting production in that region if tests prove favorable. It is believed that silt deposited by the floods appears to give something to the soil that enables it to counteract to some extent both of the banana diseases.² Tests have also been under way to determine if sufficient water can be obtained from wells to successfully irrigate a banana crop, as the dry season extends for approximately six months in the western regions of Nicaragua.³

Although some bananas will continue to be produced in Nicaragua, inasmuch as they are an important item in the domestic diet, it is doubtful if the country will again figure importantly as a banana exporter in the years to come. From all indications it appears that the Nicaraguan banana industry will remain more or less dormant and that new crops, such as Hevea rubber, fibers, and oilseeds will most likely take its place.⁴

¹United States Department of Commerce. Industrial Reference Service, "Bananas," February, 1946, p. 6.

²Ibid., p. 6.

³United States Department of Commerce. International Reference Service, "Nicaragua - Economic Situation in 1946," July, 1947, p. 4.

⁴Foreign Commerce Weekly. "Banana Trade is on the Upswing," March 24, 1945, p. 25 and 25.

Panama

The Republic of Panama has an area of 28,575 square miles (see Table I page 60) and is comparable to that of the State of Maine. Its northern boundary is the Caribbean Sea, and its southern boundary is the Pacific Ocean. Panama joins Colombia on the east and Costa Rica on the west. Its Caribbean coastline has an approximate length of 447 miles and its Pacific coastline extends for 767 miles.¹

Two mountain ranges reaching an elevation of 11,000 feet extend the length of the country. The southern coastal area is somewhat narrower than the northern. The mountains are heavily forested, and the valleys and plateaus between the two ranges provide good grazing land and excellent soil for agricultural purposes.

The climate of Panama is tropical with rainfall being unevenly distributed. Average annual rainfall on the Caribbean side at Colon is 180 inches, while Panama City on the Pacific coast receives only 70 inches.²

It is significant that the western half of Panama between Costa Rica and the Canal Zone is the more important from an economic standpoint. The great abaca and banana plantations are located in this area. The majority of the population, which consists of a number of racial groups (see Table II page 61), resides in the western half of the country, the eastern

¹The Foreign Service of the United States of America. American Embassy; Panama City, Panama, "Summary of Economic Information," 1945-1946, p. 1.

²Ibid., p. 1.

half which is virtually jungle is, for the most part, uninhabited except for the San Blas and Darien Indian tribes.

There are 1090 miles of passable roads in the country; of Panama's total railroad mileage of 458 miles, it is significant that the banana industry accounts for 211 miles.¹ The Canal is the Isthmus' most important waterway, there are also numerous navigable rivers. The country is served by six airlines (see Table III page 61) making regular stops in the Canal Zone and in the western half. Very little service has been extended to the section between the Canal and Colombia. It goes without saying that Panama's chief ports are those connected with the Canal. The two United Fruit Company ports of Almirante and Puerto Armuelles are also equipped to handle ocean-going vessels.

While much of the economic activity of the Republic is associated with the Panama Canal, Panama is essentially an agricultural country. Large areas remain to be developed. In recent years the Panamanian Government has made strenuous efforts to encourage the settlement of interior areas.² The majority of the farmers are "squatters," who farm a small plot to which they have no legal title. Rarely do they remain on the same plot for two consecutive years, moving on to other

¹United Fruit Company. "Forty-Seventh Annual Report to the Stockholders of the United Fruit Company for the Fiscal Year 1946," p. 18.

²United States Tariff Commission. "Economic Controls and Commercial Policy in Panama," p. 2.

regions clearing and cultivating a new plot each year.¹

In 1902 the United Fruit Company started commercial production of bananas at Bocas del Toro on the Caribbean side of the Isthmus of Panama. By 1927 the plantations were so devastated by disease that the acreage was planted in cacao and the banana industry transferred to Puerto Armuelles, on the Pacific coast.²

Bananas have been the principal export for years, constituting from 60 to 80 per cent of the country's total exports from 1935 to 1942.³ Lack of shipping space caused by the late war reduced exports, however, as cargo space increased, exports also increased. Chiriqui Province is the largest commercial producer of bananas, exporting an average of 3,807,000 stems from 1939 to 1941. Darien Province produces approximately 45,000 stems annually, while the Province of Colon produces between 60,000 to 70,000 stems annually.⁴

As of the close of 1946, the United Fruit Company had 19,281 acres planted in bananas at Puerto Armuelles, Panama.⁵

¹The Foreign Service of the United States of America. American Embassy; Panama City, Panama, "Summary of Economic Information," 1945-1946, p. 1.

²United States Department of Commerce. Industrial Reference Service, "Bananas," February, 1946, p. 6.

³Ibid., p. 6.

⁴Ibid., p. 6.

⁵United Fruit Company. "Forty-Seventh Annual Report to the Stockholders of the United Fruit Company for the Fiscal Year 1946," p. 17.

All of the fruit produced by the United Fruit Company plus the quantity purchased by the company in its contracts with independent planters, are shipped predominantly to United States markets.

Both Panama and sigatoka disease are found in Chiriqui Province. The United Fruit Company has made strenuous efforts to combat the diseases while many independent growers having no means to do likewise, have because of necessity turned to other agricultural activities.

While export taxes have always been a minor source of income for the Government, representing less than 2 per cent of the total revenue, about 95 per cent of the total revenue from export taxes has been derived from the tax on bananas which is 2 cents per stem.¹

¹United States Tariff Commission. "Economic Controls and Commercial Policy in Panama," p. 11.

PART V - THE UNITED FRUIT COMPANY -
ITS BANANA ACTIVITIES IN CENTRAL AMERICA

For many years the public has associated the United Fruit Company solely with the banana industry. From its very beginning the Company was engaged in other activities, such as operating ships carrying freight and passengers, raising livestock, building railroads, carrying on merchandising operations, producing sugar in Cuba as well as cultivating many other tropical products.

In its first annual report of August 31, 1900, the United Fruit Company owned 212,394 acres of land in Costa Rica, Cuba, Honduras, Jamaica, San Domingo, and Colombia. Leaseholds in Costa Rica and Jamaica amounted to an additional 23,807 acres, making its total holdings 236,201 acres of which 66,294 acres were improved and under cultivation of some sort and 169,907 acres were virgin tracts.¹ Banana plantings amounted to 38,467 acres as shown in Table XIV page 113, which is of interest as it shows the agricultural resources of the United Fruit Company in its first year of operation.

The Company's first annual statement in 1900 reported that its tropical investments were \$16,949,753, of which almost ten million went for the purchasing of land, cultivation of the land, and erection of buildings. Livestock investments were \$400,000; railroads \$1,253,428; telephones \$74,000;

¹Adams, Frederick Upham. "Conquest of the Tropics," p. 91.

TABLE XIV. LOCATION AND ACREAGE OF THE UNITED
FRUIT COMPANY'S FRUIT, SUGAR CANE,
AND MISCELLANEOUS CULTIVATIONS AUGUST 31, 1900^a

Description	Costa Rica	Cuba	Honduras	Jamaica	Santo Domingo	Colombia	Total
<u>Fruit</u>							
Bananas	10,626	5,841	400	5,749	3,700	12,547	38,463
Oranges				315			315
Pineapples				17			17
<u>Sugar Cane</u>		7,803					7,803
<u>Miscellaneous</u>							
Cocoanuts				1,830		12	1,842
Coffee	46			10		2	58
Cocoa				115		140	255
Rubber	65			79		163	307
Para Grass	2,380					78	2,458
Guinea Grass	3,417						3,417
Vegetables						12	12
Other Lands	3,276	3,539	100	4,151	200	81	11,247
<u>Total Acreage</u>	19,810	17,182	500	12,266	3,500	12,025	66,294

^a(From Adams, Frederick Upham. "Conquest of the Tropics," p. 91)

towboats, launches, and lighters \$95,673; wharves \$233,560; and a sugar mill in Cuba \$365,000. In addition to ten ships owned, the Company chartered from thirty to fifty vessels.¹

To give an idea of the tremendous growth of the United Fruit Company since 1900, its fixed asset investments in tropical divisions alone as of January 4, 1947 totaled \$198,028,827 as compared to \$16,949,753 in 1900. Total assets as of January 4, 1947 (after Reserves for Depreciation) were \$254,004,455.² Refer to Table XV for breakdown of fixed assets.

TABLE XV. STATEMENT OF FIXED ASSETS^a

	Investment	Book Value
Lands	\$ 29,095,732.13	\$ 14,864,373.63
Houses and buildings	30,326,259.52	11,808,822.92
Cultivations	54,031,734.03	23,063,400.48
Equipment	33,881,953.73	15,023,460.94
(a) Railways and tramways	40,486,284.51	19,196,154.15
Wharves, boats, etc.	4,186,471.97	1,793,768.18
(b) Sugar mills and refineries	18,345,187.94	4,845,406.77
Steamships	61,227,305.57	33,734,310.93
	271,580,529.40	124,329,708.00
(c) Livestock	2,676,273.42	2,676,273.42
Total	<u>\$274,256,802.82</u>	<u>\$127,005,981.42</u>

(a) Includes roadway, track, and rolling stock.

(b) Includes buildings and equipment.

(c)	(Cattle	35,481
	(Horses and mules	18,271
	(Other animals	410
	Total	<u>54,122</u>

a (From United Fruit Company. "Forty-Seventh Annual Report to the Stockholders of the United Fruit Company for the Fiscal Year 1946," p. 16.)

¹Adams, Frederick Upham. op. cit., p. 98.

²United Fruit Company. "Forty-Seventh Annual Report to the Stockholders of the United Fruit Company for the Fiscal Year 1946," p. 12.

Of the total investment of \$274,256,802.82 (Table XV page 114), \$12,324,396.56 represents the Company's total investment in fixed assets - Domestic Holdings (United States).¹

In comparison with Table XIV, page 113, the Company reported its holdings of improved lands and cultivations as of January 4, 1947 to consist of the following:

TABLE XVI. STATEMENT OF IMPROVED ACREAGE
LANDS AND CULTIVATIONS

<u>BANANAS</u>		
Colombia	1,849	
Costa Rica	28,574	
Dominican Republic	865	
Guatemala	33,313	
Honduras	42,690	
Jamaica	649	
Panama	19,281	
Other	<u>3,125</u>	130,346
<u>SUGAR CANE</u>		
Cuba	94,315	
Jamaica	<u>3,815</u>	98,130
<u>CACAO</u>		
Costa Rica	24,901	
Panama	12,842	
Other	<u>10,787</u>	48,530
<u>ABACA</u> (Cultivations operated for others)		26,784
<u>OTHER IMPROVED ACREAGE</u>		<u>161,982</u>
Total		<u>465,772</u>

Note: The above does not include unimproved acreage which, if included, would bring United Fruit's holdings owned and leased to well over 3,000,000 acres (see page 25).

^a(From United Fruit Company. "Forty-Seventh Annual Report - 1946," p. 17)

¹United Fruit Company. "Forty-Seventh Annual Report to the Stockholders of the United Fruit Company for the Fiscal Year 1946," p. 12.

In 1900 the United Fruit Company owned 112 miles of railroads, 17 locomotives, and 289 freight cars. After forty-five years of operations, the Company in its annual report of January 4, 1947 reported the following:

TABLE XVII. STATEMENT OF RAILWAYS
OWNED AND OPERATED

<u>MILES OF ROAD</u>	<u>RAILWAYS</u>	<u>TRAMWAYS</u>
<u>Owned</u>		
Colombia	30.57	1.08
Costa Rica	220.83	87.74
Cuba	332.25	-
Guatemala	210.07	82.91
Honduras	337.15	13.20
Jamaica	22.81	2.56
Panama	184.43	11.12
Other	-	11.15
	<u>1,338.11</u>	<u>209.36</u>
<u>Operated</u>		
Colombia	80.08	-
Honduras	13.13	-
Panama	14.75	-
	<u>107.96</u>	
Total miles owned and operated	<u><u>1,446.07</u></u>	<u><u>209.36</u></u>
<u>NUMBER OF LOCOMOTIVES</u>		
Owned	181	32
Operated	26	-
Total	<u>207</u>	<u>32</u>
<u>NUMBER OF CARS</u>		
Owned	5,716	620
Operated	463	-
Total	<u>6,179</u>	<u>620</u>

^a(From United Fruit Company. "Forty-Seventh Annual Report - 1946," p. 18.)

Since 1900 the United Fruit Company has expended more than 300 million dollars¹ in the development of jungle areas, and several hundreds of thousands of acres of these areas have been converted into fertile, productive farms. Virgin forests have been cleared and uninhabitable swamps have been converted to rich agricultural land by scientific drainage and extensive sanitation progress.

The Company has long realized the importance of continued use of its land after soil exhaustion and disease have made the land unsuitable for banana cultivation. For many years it has carried on extensive research and experimental operations for the purpose of determining what crops can best be cultivated on abandoned banana plantations, not only by the Company itself, but also by the native farmers. Cacao, African palm oil, abaca, and various hardwoods have appeared to be the most successful new crops to date.

The Company has seen possibilities in the reforestation of abandoned areas in hardwoods, having established tree nurseries in the countries in which it operates from which it distributes seedlings and planting materials to nationals and others free of charge. This reforestation program will not only assist in establishing a new industry in these areas in the years to come, but will also result in the reforestation of forest regions which have been neglected or destroyed over a

¹United Fruit Company. "Forty-Seventh Annual Report to the Stockholders of the United Fruit Company for the Fiscal Year 1946," p. 7.

long period of time. Such a program will result in a decrease in soil erosion and will furnish an improvement in the water supply for centers of population and irrigation districts.¹

The Company is also carrying on experiments with various farm crops which, it is hoped, can be cultivated profitably by local farmers. In co-operation with the Escuela Agricola Panamericana (Pan American Agricultural School), agricultural bulletins, seed and nursery stock are being distributed throughout Central America. It is hoped that through these means up-to-date scientific knowledge will enable the native farmers to improve their crops.²

The Escuela Agricola Panamericana, located not far from Tegucigalpa, the capital of Honduras, was founded by the United Fruit Company in 1943 as part of a program of co-operation in the agricultural development of the tropical republics.³ The United Fruit Company has paid all costs of the school, which included an expenditure of \$750,000 for land and physical properties as well as providing annually about \$175,000 for maintenance and also the building of an endowment fund which now totals more than \$1,500,000.⁴ The chief objective of the school is to train young men of the Central American Republics

¹United Fruit Company. "Forty-Seventh Annual Report to the Stockholders of the United Fruit Company for the Fiscal Year 1946," p. 9-10.

²Ibid., p. 10.

³Agriculture in the Americas, "Training Tropical Agriculturists," April-May, 1947, p. 66.

⁴Ibid., p. 66.

to be efficient tropical agriculturists.

In the cultivation and shipment of its own crops, the United Fruit Company makes a substantial financial contribution to the national economy of the Central American countries in which it operates. In 1946, \$43,300,000 was paid in salaries and wages; \$18,000,000 was paid to independent planters and merchants for purchases of locally grown agricultural products and merchandise used in the tropical operations of the Company; and \$5,400,000 was paid for taxes and duties of all classifications.¹

Employment in the banana industry has always been relatively stable. Even in the depression days when the number of unemployed increased in the United States and as the Works Progress Administration struggled to shorten the length of breadlines, the banana lands of Central America were substantially free from unemployment and hunger.² Banana payrolls in 1939 listed more than 250 professions and trades.³

One factor that has had much to do with the success of the United Fruit Company is its diversified source of supply of bananas. When hurricanes, floods, or drought occur in one country, the Company can rely on other countries for its banana supply. In August, 1947 the Company's division at Puerto Armuelles, Panama experienced the heaviest wind and rain storm

¹United Fruit Company. "Forty-Seventh Annual Report to the Stockholders of the United Fruit Company for the Fiscal Year 1946," p. 10.

²Wilson, Charles Morrow. *op. cit.*, p. 277.

³*Ibid.*, p. 277.



in its entire history, losses approximating 3,000,000 stems plus untold damage to plants. These losses came at a time when the Company was planning to increase exports as new plantations were to be in bearing by the end of 1947 with actual cuttings starting in October and November. Company officials had previously estimated 6,000,000 stems for the 1947 production, but after this crippling blowdown, it was estimated that normal exports could not be resumed for six months and until that time monthly exports would approximate 40,000 stems.¹

The Company's subsidiary, the Tropical Radio Telegraph Company, originally established to provide communication facilities between the Company's tropical divisions and its home office at Boston, is connected with the principal communication systems of the world, and its function is to serve the general public. In 1945 it handled the heaviest volume of radio-telegraph and radio-telephone business in its history.² During the war years there was no case of failure of any Tropical Radio Telegraph or telephone circuit between the Central American countries, Panama, the Canal Zone, and the United States. A large part of the business handled was directly connected with the war effort.³

No other agency has had more to do with combating tropical diseases than has the United Fruit Company. It maintains 13

¹From copy of Consular Report Number 249, American Embassy; Panama City, Panama, August 20, 1947.

²United Fruit Company. "Forty-Sixth Annual Report to the Stockholders of the United Fruit Company for the Fiscal Year 1945," p. 7.

³Ibid., p. 7.



modern, up-to-date hospitals and many field dispensaries scattered about over its vast banana lands. It furnishes medical attention to over 200,000 persons¹ every year, protecting and maintaining the health of its employees and their dependents, keeping labor efficiency at the highest standard practicable and providing sanitary and healthful surroundings for the crews aboard the ships it operates.

On the subject of United Fruit's great work in tropical medicine, the head of the Tulane School of Tropical Medicine of New Orleans, Louisiana says:²

"The magic touch of tropical sanitation introduced by the United Fruit Company has transformed this deadly climate into a habitable zone. The vast improvements there do the genius of American medical men a credit that only future ages will appreciate. Everyone knows what great sanitary work the American Government has accomplished in the Canal Zone, but few realize that a similar improvement has been worked in the rich fruit centres of every country to the south of us, and that the United Fruit Company is entitled to the credit for this great achievement."

Educational facilities provided for by the United Fruit Company, while limited, are equal to those in the United States. Schools are well constructed and well supplied. Modern teaching methods are employed with both American and native teachers in charge of classrooms. High school facilities are usually not provided which makes necessary the sending of older students to schools and colleges in the capital cities or to United

¹United Fruit Company. "Its Activities at Home and in the Tropics," p. 7.

²Adams, Frederick Upham. *op. cit.*, p. 265.

States' schools. By 1940, United Fruit had built and was maintaining 81 schools for more than 7,000 children of its employees.¹

From a scant 10 ships owned in 1900, the "Great White Fleet" in 1940 consisted of 96 owned and chartered vessels nearly all of which were fully refrigerated. The Company offers more than transportation of materials and merchandise between the United States and Latin America. It maintains a service which includes information and instructions as to proper packing of goods, co-operation in moving goods from inland points to the ports of loading, and the correct preparation of shipping papers. Exporters and importers are assured of prompt delivery and careful handling of merchandise. It maintains its own passenger and freight offices not only in the tropical areas, but in the principal cities of the United States as well. The Company is represented by agencies in the leading ports of Great Britain and the Continent.

During 1939 the Company's ships made 1574 round-trip voyages totaling 5,830,000 nautical miles. In addition to bananas, the "Great White Fleet" transported 1,455,901 tons of general cargo and 56,693 passengers.³

Owing to the nature of its activities, the United Fruit Company carries on a large merchandise business in its tropical

¹Wilson, Charles Morrow. op. cit., p. 283.

²United Fruit Company. "Its Activities at Home and in the Tropics," p. 4.

³Ibid., p. 4.

divisions, furnishing outlets for American-made goods. Almost every conceivable article used in science, manufacturing and commerce including textiles, foodstuffs, clothing, hardware, structural steel, and medicines are found on the shelves of its scattered commissaries at prices invariably below that of the merchants of the countries in which the Company operates.

PART VI - POST-WAR PROBLEMS
OF THE BANANA INDUSTRY

Panama and sigatoka are the greatest enemies of the banana, and their effects upon the banana industry have been most serious. Prior to the late war, any drop in exports almost without exception, could be traced to Panama and sigatoka diseases.¹

Panama, or wilt disease, thrives in the humidity and low-lying acid regions of Central America. The disease attacks the plant itself, first causing the leaves to wilt and die; finally the plant rots off at the ground roots which eventually kills the plant. Panama made its appearance in Central America in 1910 and by 1920 it had become a major problem. After the disease was once started, there was no way of checking its spread; the only recourse was to move on to other areas where the disease had not made its presence known.² This proved to be a costly procedure, as it meant not only the abandonment of farm land, but also the loss of enormous sums which had been invested in developing the banana plantation. As the industry moved on to other localities, labor also shifted; towns and villages sprung up and disappeared.

Panama disease is caused by a fungus that will live in the soil for many years after the land is no longer used for banana cultivation. The fungus causing the disease is specific to the

¹United States Department of Commerce. Industrial Reference Service; "Bananas," February, 1946, p. 3.

²Foreign Commerce Weekly. "Banana Trade is on the Upswing," March 24, 1945, p. 11.



Gros Michel and several other species of bananas, however, the fungus does not cause disease in other crops such as cacao and abaca which have been planted on abandoned banana areas. This type of soil appears to be well-suited for the growing of these two crops as well as others.¹

Recently it has been reported that United States' scientists have found a way of combating the disease. Experiments on biological disinfection of soil conducted at La Ceiba, Honduras offers hope of not only of checking the disease, but also of restoring diseased areas for banana cultivation purposes.²

About 1935, sigatoka or leaf spot disease, broke out in Central America and threatened the industry in several countries. The disease does not attack the plant proper but attacks and kills the leaves, resulting in small and undeveloped fruit.³ This disease can be controlled by spraying the banana leaves with a mixture of copper sulphate and lime. This is a costly procedure as it requires expensive spray materials, pumps, pipelines, and the construction of mixing stations.

Less than one-twentieth of one per cent⁴ of the tillable soil of the American tropical regions is suited to banana cultivation, yet the banana industry takes a foremost role in

¹Foreign Commerce Weekly. "Banana Trade is on the Upswing," March 24, 1945, p. 11.

²Ibid., p. 11.

³United States Department of Commerce. Industrial Reference Service; "Bananas," February, 1946, p. 3.

⁴Wilson, Charles Morrow. op. cit., p. 7.



the economy of the countries in which it is established. On the other hand, the Central American Republics cannot possibly endure as "Banana Republics." It is impossible to maintain one crop when all others are dying or dead. The solution which the banana trade is proposing, accomplished to some extent already, involves the establishment of many subsistence crops which can be grown profitably by the Central American inhabitants. Another decade may witness more acres planted to abaca, cacao, African oil palm, cinchona, rubber, and hardwoods than to bananas.¹

"In abaca, one of the great crops has moved nearly halfway around the earth and has come to the Americas where it will stay. For a century (before the late war), American vessels had been wholly dependent on Far Eastern sources for Manila hemp, which makes the finest cordage. Ninety-five per cent of the supply came from the Philippine Islands and the rest from the East Indies. At the time of Pearl Harbor our supply was limited to coiled lines on ship decks or what was stored in warehouses.

"The crops of the East, replanted in the Americas, where in many instances they originated, can offer new peacetime employment and industrial opportunities for the Americas."²

The outlook for the banana trade is extremely favorable. In only two major banana producing countries, Cuba and Nicaragua, has production declined to such an extent as to make any future recovery doubtful.³ Hurricanes, disease, and the wartime shipping shortages were among the chief causes for the decline in these two countries. Other banana producing countries are

¹Wilson, Charles Morrow. op. cit., p. 7.

²Atlantic Monthly. "New Crops for the New World," Samuel Zemurray and John Terry, January, 1945, p. 98.

³United States Department of Commerce. Industrial Reference Service; "Bananas," February, 1946, p. 2.



in the process of restoring to normal pre-war production.



PART VII - SUMMARY

Though of ancient origin, the banana has become a staple food of modern times. To a considerable extent, the story of the banana is the story of tropical man. The first home of the edible banana was, in all probability, the humid tropical regions of southern Asia where the seedless varieties of the true domestic banana are commonly found growing wild. It is probable that bananas were carried to the islands of the Pacific by the first migration of the Polynesians about the time of Christ. Many of the early explorers reported finding the plants in Hawaii and on Easter Island, the latter nearly 2,000 miles from the nearest inhabited land.

It is believed that the Arabs, who obtained the fruit in India, introduced it into the Holy Land and northern Egypt, where it was gradually carried across equatorial Africa to the Guinea coast on the Atlantic. From here the Portuguese carried the plant and the African slaves whom they captured to the Canary Islands. Credit for bringing the banana from the Canaries to the Western Hemisphere belongs to Friar Tomas de Berlanga, a Spanish missionary.

When the banana in its westward travels reached the Pacific coast, its journey around the world was complete.

The banana belongs to the family Musa. There are many species of the banana, however, the most important species commercially is the *Musa sapientum*. This species has several varieties, among them the Gros Michel, the banana produced for



shipment in most of the countries of the Western Hemisphere except Brazil, and best known in the United States. This fruit stands transportation better than other varieties which bruise and rot more easily.

Bananas grow to best advantage in a tropical, humid climate, and in a fine, sandy loam. The plant requires a hot climate, without long droughts or strong winds. Plants are started from rhizomes or "bits," which are selected from vigorous cultivations. They are cut in pieces weighing from 3 to 4 pounds each and are planted in holes about 12 inches deep and from 11 to 13 feet apart. The crop begins to ripen some 12 to 15 months later.

Central American countries bordering the Caribbean Sea offer ideal growing conditions; and it is in these countries that the banana industry has been promoted with United States capital. Millions of dollars were spent transforming a primeval jungle into areas of cultivated land. The country was explored for suitable land, and the jungle was cleared away. Railroads were built. Wharves facilitating loading on ships were constructed, as were bridges and buildings necessary for the welfare of the employees.

Agriculture is the predominant industry in all of the Central American Republics, their economic life centering around two agricultural products - bananas and coffee. The export trade of Honduras and Panama depends chiefly on bananas while bananas rank second in importance in the economy of Costa Rica



and Guatemala. Coffee, Costa Rica's chief export, has declined in recent years; and there are indications that bananas may overtake coffee as the principal export. Nicaragua, formerly a large producer of bananas, and British Honduras have declined in importance in recent years. While the industry in these two countries has made a slight come-back since the war-years, it is doubtful if either will again figure importantly as banana exporters in the years to come.

The consolidation of the Boston Fruit Company and the interests controlled in Central America by Minor C. Keith in 1899 gave birth to the present banana industry. As a result of the solution of the main problems involved in the organization and development of the banana trade, the United Fruit Company has developed in the Caribbean area the most important fruit farms of the world, all within a very short period of time. Vast areas of heretofore useless tropical jungles have been converted into rich productive farms. It has meant the populating of vast areas formerly uninhabited, and the increasing population of these areas has been protected, kept in good health, and given an opportunity to earn a livelihood. Yellow fever, smallpox, enteric dysentery have been virtually eliminated, and great progress has been made in the treatment and control of hookworm and malaria.

In only a little more than a third of a century the United Fruit Company has become the largest farm enterprise in the Americas. Between 1930 and 1940 the Company paid approximately



40 million dollars in taxes to the Central American governments, 200 million dollars in wages to the inhabitants of those countries, and 140 million dollars for the purchase of bananas and other products of the Central American countries.¹

In 1940 approximately one-half of the total national incomes of such countries as Honduras and Costa Rica came from the banana companies. Many of the Central American countries were financially dependent on a mere 400 or 500 square miles of banana farms. This is a dangerous one-sided economy as, except for bananas and coffee, practically all the exports of the lowland **tropics** have fallen off.² There are indications that the Central American countries cannot possibly endure as "Banana Republics." The solution which the banana trade is proposing involves the planting of many subsistence crops which can be grown profitably by the Central American inhabitants.

The banana trade has considerably increased the purchasing power of the Caribbean countries and, in turn, has created expanding markets for manufactured articles principally from the United States. The huge sums spent in wages and for purchased fruit from independent growers in Central America have helped to stabilize the currency of the countries in which the banana industry does business.

Increased steamship service has improved trade relations

¹Wilson, Charles Morrow. *op. cit.*, p. 283.

²*Ibid.*, p. 283.



between the Caribbean area and the United States; rapid, dependable communications between the cities and towns of Central and parts of South America and the manufacturing centers of the United States have been increased through the Tropical Radio Telegraph Company, a subsidiary of the United Fruit Company.

Owing to the healthfulness and charm of the Central American tropics, a large tourist business has been built up by the ships of the banana trade, contributing to a better understanding, peace, goodwill, and friendship between the United States and the Republics of the Caribbean.¹

¹United Fruit Company. "Its Activities at Home and in the Tropics," p. 12.



BIBLIOGRAPHY

This bibliography contains the references which have been found especially helpful in preparing this thesis.

Adams, Frederick Upham. "Conquest of the Tropics," Garden City, New York: Doubleday, Page and Company, 1914. (Extent utilized: very few references.)

American Consulate; Belize, British Honduras. "General Information - American Consular District of British Honduras," April, 1946. (Extent utilized: several references Part IV.)

American Embassy; Guatemala City, Guatemala. Consular Report No. 292, September 11, 1947. (Extent utilized: several references.)

American Embassy; Tegucigalpa, Honduras. Consular Report Number 247, September 19, 1947. (Extent utilized: several references.)

American Embassy; Panama, R. Panama. Consular Report Number 249, August 20, 1947. (Extent utilized: several references.)

Atlantic Monthly. January, 1945. (Extent utilized: reference to New Crops, page 126.)

Dun & Bradstreet. Foreign Sales and Research Department. "A Geo-Economic Study of Latin America," Printed in U. S. A., 1945. (Extent utilized: frequent references Part IV.)

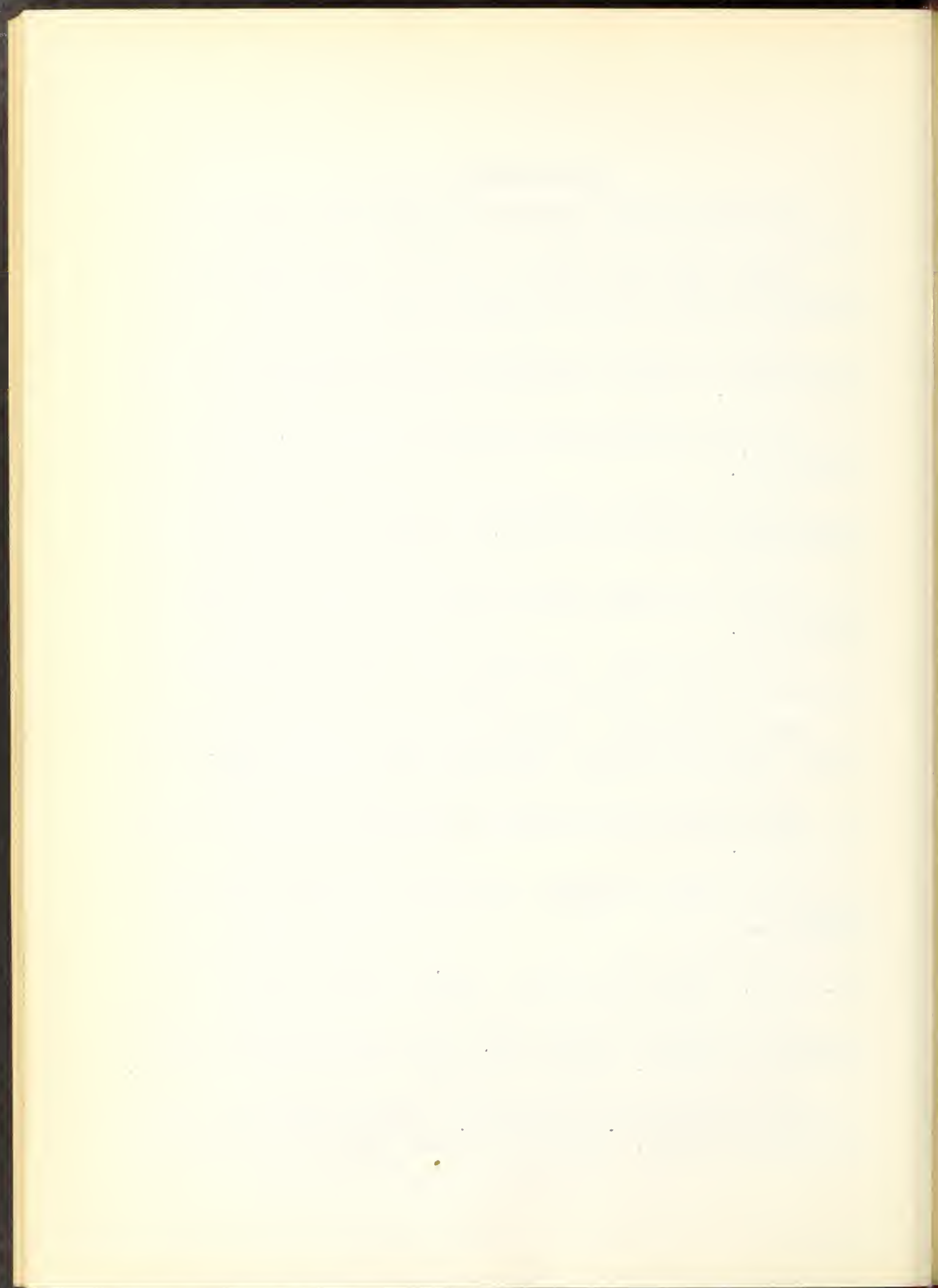
Encyclopaedia Britannica. Volume III, 1910; Volume 10 and 11, 1946. University of Chicago. (Extent utilized: several references.)

Encyclopedia Americana. New York, Chicago: Americana Corporation, 1946. (Extent utilized: highway mileage for Honduras.)

Fawcett, William. "The Banana," London: Duckworth and Co., 1913. (Extent utilized: several references.)

Foreign Service of the United States of America. "Panama - Summary of Economic Information," American Embassy; Panama, R. Panama, 1945-46. (Extent utilized: occasional references.)

Foreign Service of the United States of America. "Nicaragua - Summary of Economic Information," American Embassy; Managua, Nicaragua, 1945-46. (Extent utilized: occasional references.)



BIBLIOGRAPHY

Foreign Service of the United States of America. "Costa Rica - Summary of Economic Information," American Embassy; San Jose, Costa Rica, 1945-46. (Extent utilized: occasional references.)

Horn, Paul V. "International Trade Principles and Practices," Revised Edition. New York: Prentice-Hall, Inc., 1946. (Extent utilized: one footnote, page 65.)

Kepner, Jr., Charles David and Jay Henry Soothill. "The Banana Empire," New York: The Vanguard Press, 1935. (Extent utilized: occasional references.)

Jones, Chester Lloyd. "The Caribbean Since 1900," New York: Prentice-Hall, Inc., 1936. (Extent utilized: several references.)

Moody's Industrials, 1947. (Extent utilized: source of assets and holdings of the Standard Fruit and Steamship Company.)

Office of Inter-American Affairs. "Handbook of Latin-American Population Data," Washington: Government Printing Office, 1945. (Extent utilized: several references.)

Pan American Union. Foreign Trade Service. Washington: Government Printing Office, June, 1943. (Extent utilized: very little.)

Reynolds, Philip Keep. "The Banana," Boston and New York: Houghton Mifflin Company, The Riverside Press Cambridge, 1927. (Extent utilized: occasional references.)

Roberts, Walter Adolphe. "The Caribbean," Indianapolis, New York: The Bobbs-Merrill Company, 1940. (Extent utilized: one footnote, page 1.)

Publicity Department, United Fruit Company. "United Fruit Company - Its Activities at Home and in the Tropics," April 1, 1940, Boston, Massachusetts. (Extent utilized: occasional references.)

Educational Department, United Fruit Company. "The Story of the Banana," 1941, Boston, Massachusetts. (Extent utilized: Parts I, II, and III have a number of references.)

United Fruit Company. "Forty-Sixth Annual Report to the Stockholders of the United Fruit Company for the Fiscal Year 1945." (Extent utilized: one footnote.)

BIBLIOGRAPHY

United Fruit Company. "Forty-Seventh Annual Report to the Stockholders of the United Fruit Company for the Fiscal Year 1946." (Extent utilized: 1946 financial statistics, acreage reports etc..)

United States Department of Agriculture. Bureau of Foreign and Domestic Commerce. Industrial Reference Service. "Bananas," Volume 4, Part 5, Number 2. Washington: Government Printing Office, February, 1946. (Extent utilized: frequent references.)

United States Department of Agriculture. Office of Foreign Agricultural Relations. "Agriculture in the Americas," Washington: Government Printing Office, April, 1945. (Extent utilized: several references.)

United States Department of Agriculture. Office of Foreign Agricultural Relations. "Agriculture in the Americas," Washington: Government Printing Service, April-May, 1942. (Extent utilized: several references.)

United States Department of Commerce. Office of International Trade. International Reference Service. (See below)

"Costa Rica - Summary of Current Economic Information," Volume 4, Number 10, Washington: Government Printing Office, May, 1947.

"Economic Review of Guatemala in 1946," Volume V, Number 5, Washington: Government Printing Office, January, 1948.

"Nicaragua - Summary of Current Economic Information," Volume 4, Number 6, Washington: Government Printing Office, April, 1947.

"Living and Office Operating Cost in Honduras," Volume 4, Number 44, Washington: Government Printing Office, September, 1947.

"Economic Review of Costa Rica, 1946," Volume IV, Number 87, Washington: Government Printing Office, December, 1947.

"Nicaragua - Economic Situation in 1946," Volume 4, Number 33, Washington: Government Printing Office, July, 1947.

(Extent utilized of the foregoing: frequent references.)



BIBLIOGRAPHY

United States Department of Commerce. Office of International Trade. Industrial Reference Service, "Bananas," Volume 5, Part 5, Number 38, Washington: Government Printing Office, August, 1947. (Extent utilized: several references.)

United States Tariff Commission. Washington: Government Printing Office. (See below)

"Economic Controls and Commercial Policy in Costa Rica," 1945.

"Economic Controls and Commercial Policy in Guatemala," 1947.

"Economic Controls and Commercial Policy in Honduras," 1947.

"Economic Controls and Commercial Policy in Nicaragua," 1947.

"Economic Controls and Commercial Policy in Panama," 1946.

(Extent utilized of the foregoing: frequent references.)

United States Department of Commerce. Bureau of Foreign and Domestic Commerce, "Commercial Travelers' Guide to Latin America; Part III, Mexico, Central America and Caribbean Countries," Washington: Government Printing Office, 1941. (Extent utilized: several references.)

United States Department of Commerce. Washington: Government Printing Office. (See below)

"Foreign Commerce Weekly,"

April 3, 1943

March 24, 1945

June 16, 1945

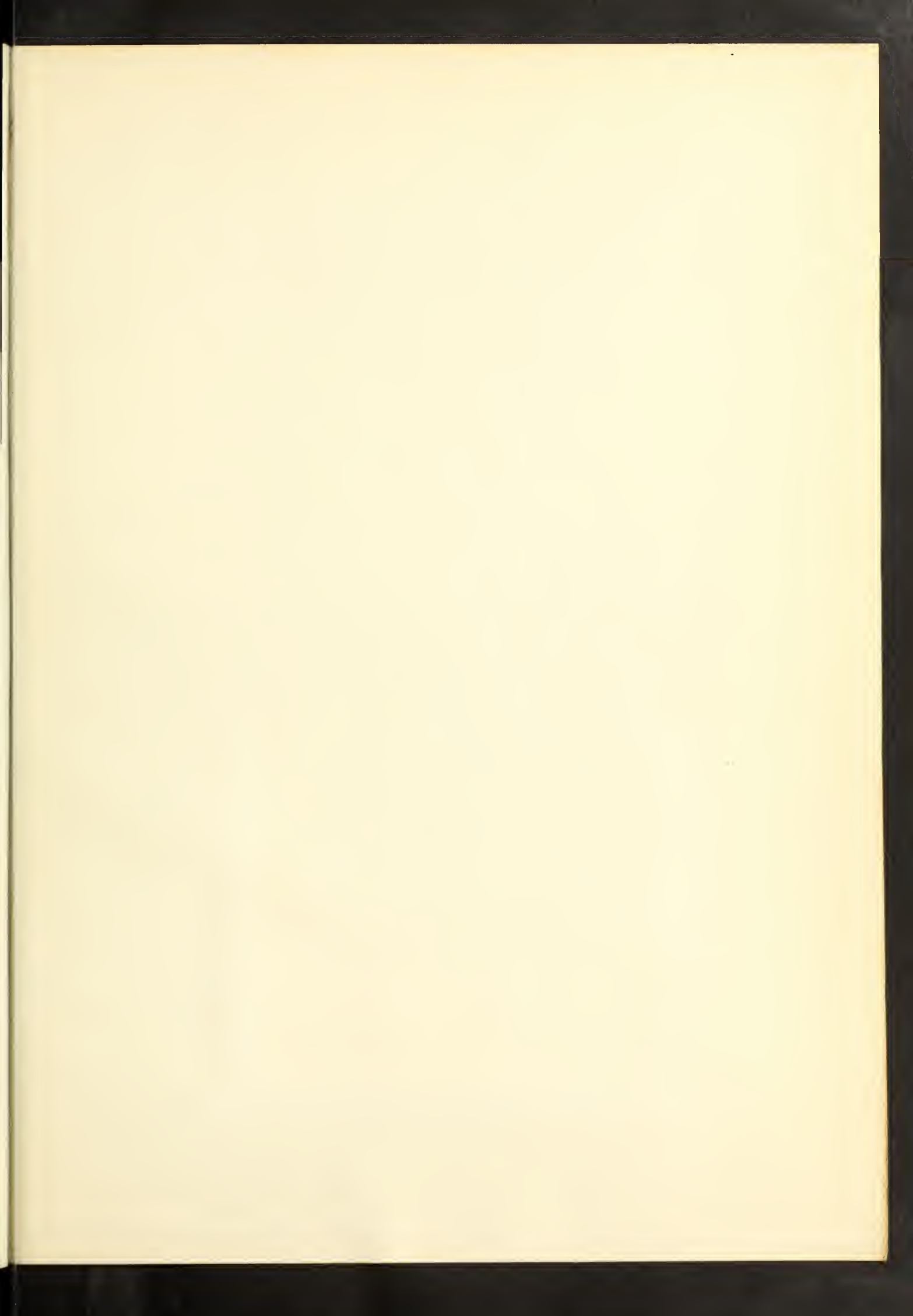
(Extent utilized: several references.)

Wilson, Charles Morrow. "Empire in Green and Gold," New York: Henry Holt and Company, 1947. (Extent utilized: frequent references.)









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